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lasting support

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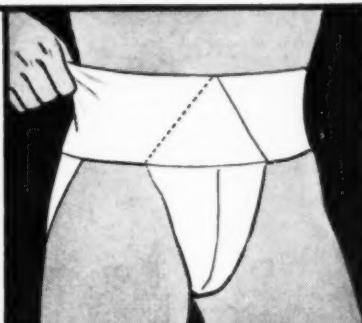
It will pay you to depend on Bike—a supporter whose scientific design, careful construction and superior high grade materials assure maximum protection and economy. Bike Supporters are worn by 2 out of 3* athletes. Give your players the finest—insist on Bike when you buy!



*Impartial survey by A.C. Nielsen Co.
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Badly made supporters
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become limp, uncomfortable—
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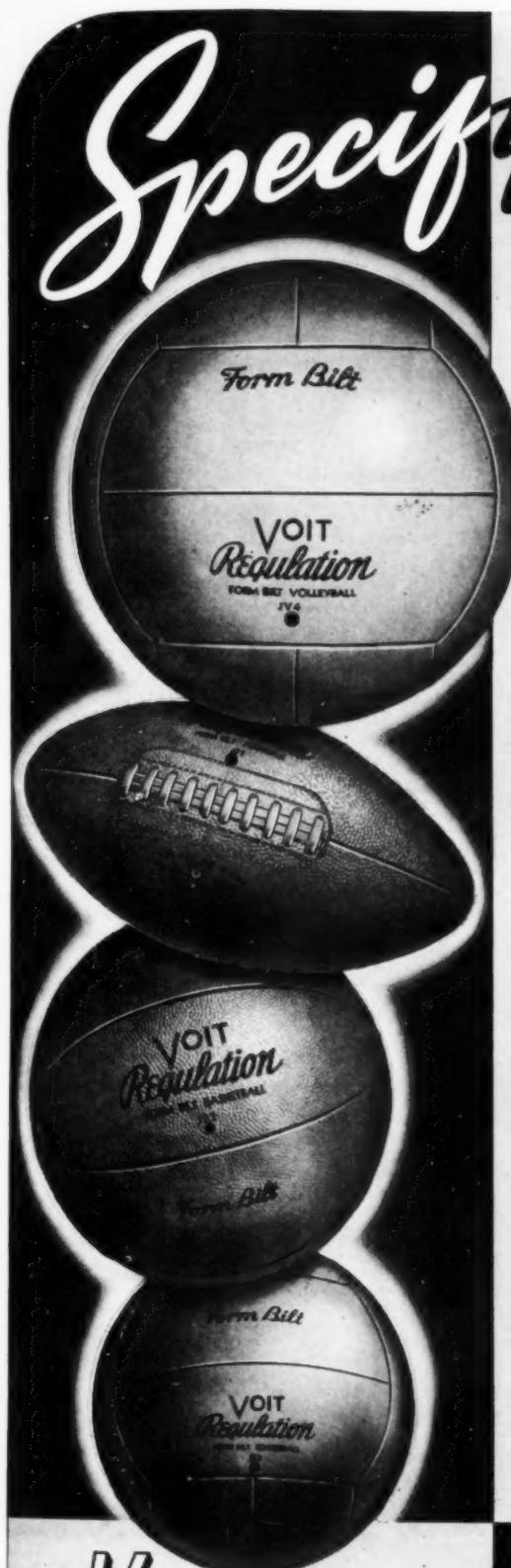
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SCHOLASTIC COACH

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SCHOLASTIC COACH is issued monthly ten times during the academic year (September through June) by Scholastic Corporation, M. R. Robinson, president. Publishers of *Scholastic*, the American High School Weekly; issued in two editions, one for students and one for teachers.

Address all editorial and advertising communications to SCHOLASTIC COACH, 250 E. 43rd Street, New York, N. Y.

G. Herbert McCracken, publisher; S. Z. Oppenheim, advertising manager; John T. Lindenberg, associate advertising manager; Pacific Coast Rep., E. S. Townsend, Russ Bldg., San Francisco, Calif.

Subscriptions for the United States and Canada, \$1.50 a year. Foreign \$2. Back issues: 25 cents, current volume: 50 cents, previous volumes. All correspondence concerning subscriptions and circulation should be addressed to Circulation Department, 430 Kinnard Ave., Dayton, Ohio.

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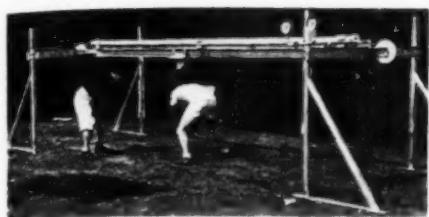
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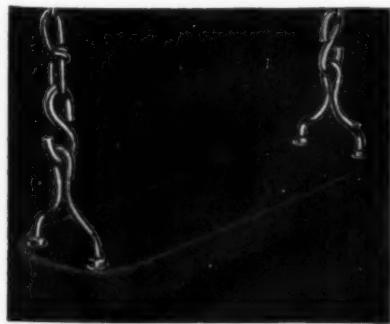


Aqua-Seal inner rings keep the cap from slipping off in dives from various heights, and it stayed firmly on the head despite the fact it has no chin strap.

Free Tennis Films

The Dunlop Tire and Rubber Co. has two free films available for high schools: a one-reel 16 mm silent film called "Net Results," starring Vinnie Richards, and a one-reel 16 mm sound film called "Highlights in the Tennis Career of Vincent Richards." They may be secured by writing to: Promotion Dept., Dunlop Tire and Rubber Co., 500 Fifth Avenue, New York, N. Y.

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Engineers of the American Playground Device Co. have developed a rubber swing seat which is sturdier, more durable and safer than the conventional wood seats. The new seat has no dangerous corners, sharp edges or fittings or cut-off ends which might cause injury to the user. Instead, all ends and edges are smoothly rounded, with the top of the seat ribbed to prevent the swinger from slipping off. The entire unit is completely covered with a heavy thickness of live, springy, finest quality rubber, with the interior core (or frame) constructed of aluminum to provide both greater strength and far lighter weight. For perfect balance and further safety, suspension clevises run through the seat, and are rigidly secured with bolts entirely concealed on the underneath side of the unit in countersunk holes. Thus, there are no bolt heads or other protruding obstructions which might injure the user or tear his or her clothes.

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COACHES...
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Back of the National APPROVAL given Super Gym Finish are many important reasons. First it gives everything desired, Non-skid, Sanitary, Long Wearing, Attractive, Easy to Maintain . . . for a gym floor finish that is an asset to the game of Basketball and a varied indoor physical educational program.

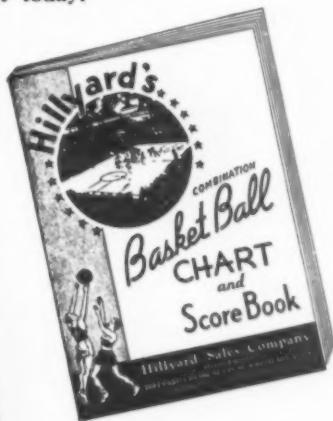
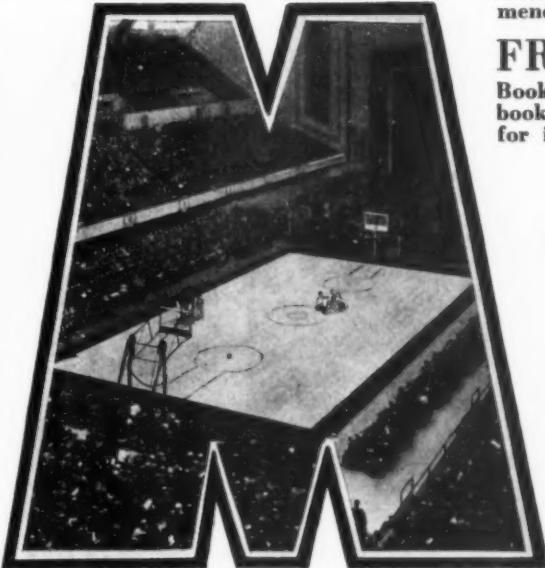
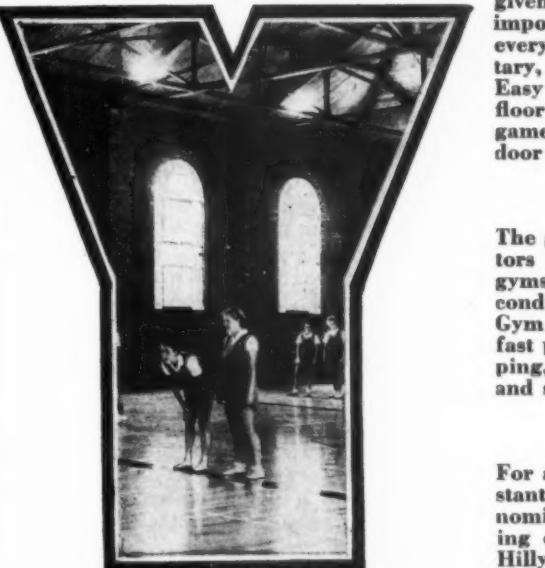


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For a gym floor that will be a constant delight in appearance, economical upkeep and the long wearing qualities . . . call or wire the Hillyard Sales Co. for a maintenance expert, his advice and recommendations at no obligation.

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KEEP POWER UP- FATIGUE DOWN

with KNOX GELATINE

Knox, and Knox alone, can offer this scientific proof that their gelatine can increase energy and endurance, and lessen fatigue.

Basketball teams all over the country are taking Knox Gelatine regularly for greater endurance and more staying power. No foot game takes more out of a player than basketball. It's an on-your-toes, fast-moving, quick-breaking game. An instant's hesitation may mean lost points. The man who can keep up the gruelling pace and make every second count, is the man with extra endurance.

NO MID-SEASON LET-DOWN

Mid-season staleness is a common bugaboo to the basketball player. The coach of a well-known boys' school reports that his players maintained top form throughout the season on the Knox Gelatine endurance diet. Although playing an average of five and six times a week, the players finished the strenuous season in excellent physical condition.

GIRLS BENEFIT, TOO

The Knox Gelatine diet to increase stamina is of vast importance to girls

playing basketball. Girls have less wind and less muscular strength—yet the modern girls' basketball game has accelerated in pace in proportion to the men's. Extra reserve force enables the girls to get best results with far less effort.

KNOX IS THE GELATINE

Knox Gelatine is the gelatine used on training tables of leading colleges. One large Eastern university has installed a gelatine bar in the locker room. It is important to remember that only Knox Gelatine was used in the scientific tests to prove gelatine does increase endurance and lessen fatigue.

Knox Gelatine is manufactured by the most modern scientific methods, under constant bacteriological control. The highest standards of purity are maintained at all times. There are many inferior gelatines on the market. They will not serve the purpose and may be actually dangerous. Also, ready-flavored gelatine desserts which are only about 10% gelatine and about 85% sugar will not do. Be sure you use only pure Knox Gelatine—the food that fights fatigue.



THIS IS THE GELATINE

*For More Endurance—
Less Fatigue*

Knox Gelatine was used exclusively in the scientific tests and experiments. Ready-flavored gelatine desserts which are about 85% sugar and only about 10% gelatine will not do. Be sure to use the plain, unflavored Knox Gelatine—K-N-O-X—which you can get from any grocer.

FORMULA ADVISED BY FAMOUS COACHES

1. Pour 6 ounces of cold water in an 8-ounce glass.
2. Pour onto the water 2 envelopes (or two level tablespoonfuls) of Knox Gelatine.
3. Let liquid absorb the gelatine. Then stir briskly and drink quickly. If it thickens, stir again.
4. Do this twice a day—before meals—for seven days. Then reduce to one envelope (or one tablespoonful) twice a day. If there is a drop in the weight, increase the gelatine feeding to the original dose of two envelopes.

FREE: WRITE FOR BOOKLET "ENDURANCE. THE WAY TO VICTORY IN BASKETBALL" TO
KNOX GELATINE CO., DEPT. 81, JOHNSTOWN, NEW YORK.

INDIVIDUAL skills in team sports have become so specialized in recent years that the opportunity for individualism is fast disappearing. Each player is more or less of a cog with a special function, whose efforts plus those of his teammates make up a machine. As far as producing winning efforts are concerned, this machine is effective. But there is more to sports than the mere winning, and it is in this respect that the machine is failing us.

Sports should be used as a means to develop the individual and not the individual a means of developing the sport; sports should be modified to fit the individual and not the individual modified to fit the sport.

Originally, sports were used to develop certain character traits that were essential in the development of manhood, such as fair play, cooperation, loyalty, self-control and sacrifice. The athletic field and the playground offered and still offer many opportunities for inculcating these traits. There is a fertile field here for the effective teaching of the concepts of fair play, respect for the rights of others, the role of leadership, the function of self-control and the place and value of self-sacrifice. These traits are needed in men more than ever before in the history of mankind.

It is true that skills are necessary for a reasonable degree of success in team sports. This means that sports should be an aid in the development of big and little muscles, in the development of posture and the proper way to walk, and should contribute to the efficient functioning of such organs as the lungs, heart and intestines. Sports thus used would not be a program of specialization, exploiting the unusual abilities of certain individuals and excluding those without such talents.

There are boys who know basketball only as a "post-pivot," baseball as a "pitcher" and football as a "blocker." These skills should not be more important than the game. The perfection of techniques and skills should be an outgrowth of the game and a desire to play a better game "and not the game an outgrowth of the development of perfected techniques" (Elizabeth Yeend Meyers).

In this event the athlete would not become a specialized unit, but an individual who is constantly acquiring knowledge and skills. Experi-

Here Below

ences obtained from such participation will serve as an integrating factor in the boys' lives.

The emphasis on highly perfected skills and techniques may have a bad after-effect. As a rule, the defeated athlete suffers from deep depression of spirit because his best was not superior to that of another. The victorious athlete may acquire one of the following attitudes: (1) undue prominence given to winning, or (2) lack of generosity or graciousness.

The first involves the impulse to excel, something that is inherent in almost all of us. So strong is this impulse that there are times an individual is tempted to resort to any means to secure his end. The urge

We pass the baton this month to Byron M. Augustine, physical education instructor at Philander Smith College, who believes that over-emphasis on specialized skills in team sports is inimical to the athlete's freedom to exercise individual initiative.

to win, therefore, may lead to a type of conduct so reprehensible that winning itself becomes the object of censure.

The question arises, should one play to win? Yes, indeed, if doing one's best is evidence of that. This means that one's best is the desired quality; and hence unfairness, selfishness, arrogance, and other undesirables would be absent when the best is present. There can be no great enthusiasm over winning when victory is not the mark of high achievement.

Specialized athletes become so absorbed at times with the idea of winning that they lose the idea of excellence. Competition may then become mean and grubby. If an athlete can arrive at a point in his thinking where it makes no great

difference whether he won or lost, there has been achieved a type of control of tremendous value. There is no need then to guard against boasting or to fight against despair. He has done his best; it was sufficient to win or it was not. But there is satisfaction in either case.

The second hazard in specialized function in sports is lack of graciousness. This, too, is associated with undue emphasis upon winning. To be ungenerous to an opponent before play or after play is to mistake the play for something other than an opportunity for friendly competition.

Some players have an idea that the sole purpose of the game is the winning. They are wrong. Sports are conducted as a sort of test to determine excellence. One who admires excellence will be glad to see it in other people. To be ungenerous to an opponent who has come by victory honestly is to mistake winning for excellence.

Specialization in sport is a serious challenge to the freedom of participation by individuals of lesser ability. The traits that are inherent in over-specialized sports do not lend themselves to the principles of tolerance and the democratic attitude that are part of our national life.

The characteristics of specialized sports are not reflected in our institutions, in our everyday manner of living, in our culture, and in our conception of our relations to one another. While all our great educational forces teach boys an understanding and appreciation of the democratic principles, and a reverence for their observance in every phase of life, the athletic field and playground are in the most strategic position to accept this responsibility.

The right of freedom of participation is closely connected with the right of the pursuit of happiness. While schools and other educational agencies lend themselves to the attainment of these rights, the sports program should support the right of freedom of participation and insure a reasonable degree of success for everybody, regardless of ability. This will allow boys of all degrees of ability to experience their needs in relation to their physical existence. These experiences are a part of the experience of the race, and without them there can be no true happiness.



**Get Off to a Fast Start Mornings With This Nourishing
"Breakfast of Champions" So Many Great Athletes Eat!**

Here's your answer to a mighty important problem facing many coaches this time of year—how you can help your boys get more benefit and more enjoyment from the substantial training breakfast athletes need every day.

Get acquainted with this keen-tasting "Breakfast of Champions," the nourishing training dish that so many baseball champions and stars in many sports are eating these mornings.

It's a heaping bowlful of Wheaties, those crisp-toasted whole wheat flakes with the national champion flavor, and plenty of milk or cream and fruit. It's a tempting, satisfying meal that's designed to click with hearty appetites every time it comes on the table!

**Try This Combination For Solid
Nourishment**

You'll notice that a "Breakfast of Champions" is a combination of three basic foods widely recommended for athletes in training—toasted whole wheat, milk and fruit. Each of these foods provides a variety of food elements athletes need. Together, they form a complete, well-rounded meal that's a true champion for nourishment.

It supplies important proteins for building and restoring body tissues. Those valuable minerals, calcium, phosphorus and iron. Vitamin A, essential to growth and maintenance of bodily condition. Vitamin B, for promoting good appetites. Vitamin C, which every athlete in training should get in

good amounts daily. And abundant food-energy, the "food-fuel" that's the largest single requirement in a balanced diet for boys engaged in strenuous physical exercise!

You can see why this "Breakfast of Champions" gets the approval of so many coaches interested in the welfare of growing athletes!

This Flavor Scores With Millions!

Wheaties give you the excellent nourishment of toasted whole wheat in a new, extra delicious form—big, crunchy flakes brimming with appetite appeal and pleasingly malt-flavored for added goodness.

This famous Wheaties flavor is bringing pleasure and satisfaction to millions of happy, hungry people, including those hundreds of champion athletes who enjoy Wheaties regularly.

So, starting right away, why not get Wheaties on your own morning schedule? Tell your boys about this nourishing "Breakfast of Champions" with the winning flavor. We're sure they will get more fun out of training, plus a lot of welcome nourishment, when they start the day this champion way.

Ask your grocer today for Wheaties—a product of General Mills.



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WHEATIES

WITH MILK OR CREAM AND SOME FRUIT

"Breakfast of Champions"

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SCHOOLBOY CATCHER IN THE MAKING

By James L. Quigley

As a college and semi-professional catcher not so long ago, James L. Quigley was more than a man in a mask. He was a student of the game, and particularly of his position. At present he is considered one of the best arbiters in New York City, and contributed an article on the subject last April. Away from his adjudicating duties, he divides his time as a physical education instructor between the Savage School of Physical Education (college) and the George Washington High School.

COMBINE the indefatigability of a workhorse with the nimble wits and agility of a first rate quarterback and you have the formula for a good catcher. You also have the reason why there are so few top-notch performers. It is



SQUAT POSITION for the sign, which is given with the right hand against the inside of the right thigh. The hand or signal finger should never pass below the line made by the legs and the buttocks, or the sign may easily be stolen.

not that our athletes avoid an activity simply because it is hard, and for that reason prefer not to work behind the bat. The shortage of good catchers is more likely caused by the nature of the job itself.

The man in the iron mask is the cornerstone of the defense. He is the only man who sees every play. He handles the pitcher, studies the batters and steadies the infield.

A good physique is naturally an important asset. But sheer size is less important behind the bat than anywhere else in the infield. There have been, and are, many excellent receivers of much less than heroic proportions. As a rule, short men excel close to the ground while tall fellows are particularly effective at

overhead work. More important than size are such requisites as large hands, a good throwing arm, strong under-pinning, and the stamina to stand the strain of the work.

The big, slow-moving boy with a million-dollar arm and a ten-cent head does not belong behind the bat. A good catcher is a paragon of nimbleness. He is a quick thinker, resourceful and has a keen sense of anticipation. He understands all game situations and the make-up of the batting order (will be discussed later).

With so many requisites to the job, you would think only God could

The receiver's worth lies in his ability to direct the defense, handle the ball cleanly and make quick throws

Most boys have a habit of dangling the mask by the strap, a practice which vitiates the elasticity of the strap and often causes it to snap. To preserve the life of the strap, the catcher should refrain from swinging the mask inadvertently. However, to play safe, an extra strap should be handy for emergencies.

The chest protector should be large enough to cover the entire thoracic and abdominal regions. Above all, it must fit snugly. Any slack or looseness exposes the collar bone and increases the possibility of injury. A snug-fitting six-inch waistband supporter and cup will

CROUCH STANCE for the target: As a rule, the glove is extended above the waist with the palm out and the fingers up. The bare hand is clenched and the weight is distributed over the balls of the feet. The fist protects the fingers.



make a first-class catcher. But there is no such thing as a "born" catcher. The only way for a boy to learn the trade is through hard work and trial and error. This takes time, but the better the head the faster the development.

No catcher should ever be asked or allowed to appear behind the bat without the protective accoutrements of the position. As it is, the job is no sinecure as far as minor injuries are concerned. Without the necessary paraphernalia, the backstop is dangerously exposed.

The mask should be lightweight, of a construction that insures the wearer of perfect vision. With the exception of the anchoring contrivance, it requires little attention.

ALERT for the throw: The receiver follows the delivery all the way in and as it thumps into his glove he is ready to retrieve it and shift into throwing position in one lightning-like motion. One step is taken—in direction of the throw.

protect the area around the groin.

Leg guards are needed for close-quarters work in blocking the plate and for protection against wild pitches and foul tips. When ordering this item, the coach should have the boy try it on. The size must be suitable to the leg length. If the guards are too long, he may suffer from chafing above the instep; if they are too short, there is unnecessary exposure of the feet.

The old axiom that an athlete is no better than his feet is particularly true in catching. Because of the strain on his feet and legs, the catcher must be well shod. He needs a good quality shoe; one that is sturdily constructed, not too heavy and with a kangaroo upper.





BALANCE for the throw: The right foot is planted firmly, the left is facing the direction of the throw and the weight is slightly in advance and over the toes. When the batter takes a cut at the ball, the catcher must be particularly careful about damage to the fingers of his unprotected hand. To safeguard against possi-



ble injury, he may shove his bare hand behind the thumb of his mitt (center). **DEVELOPING** the left hand (above): A catcher is only as good as his left hand, and should train this member during his daily practice sessions and batting drills. Note how the catcher keeps his bare hand away from any possibility of injury.

Another important consideration is his shirt. For with the possible exception of the pitcher, the catcher perspires more freely than any other player on the team. To reduce the danger of colds, muscular stiffness, sore arms, and chafing, the catcher must be well covered. His shirt must have high grade absorption quality. For cold weather, woolen shirts are essential. For warm weather, a lightweight wool or combination cotton and wool is satisfactory. Materials made of mercerized cotton yarn do an excellent job of absorbing and evaporating perspiration, and also keep the body cool and comfortable.

If possible, there should be two mitts. The first-string backstop rates a mitt he can call his own; one he breaks in, not a family affair. The extra glove may be used in the bull pen or to warm up the pitcher while the regular catcher is getting into his harness. A light compact model is recommended. Improvements in glove construction have enhanced the all-round work of the receiver and given him confidence in his

ability to hold on to the deliveries.

Not the least of the advantages of a good, well broken-in mitt is the psychological lift pitchers get when they hear their fast ball crack into the pocket. This in itself is a reason why the pitcher should not throw to a torn or patched mitt.

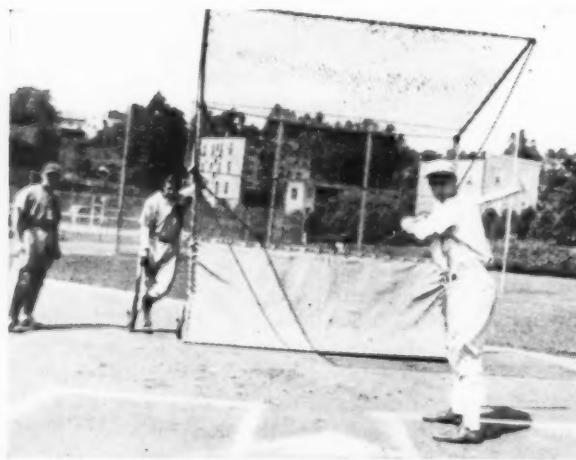
Once he breaks in his glove, the receiver should be doubly careful about bone bruises, especially when working with fast-ball pitching and particularly in cold weather. As a safeguard, the catcher may palm a piece of sponge rubber inside his glove. Occasional applications of neats foot oil to mitts, shoes and other leather materials prolong the life of the leather and keep it pliable and sweat-proof.

After strapping his equipment to his body, the catcher is ready to take his position behind the plate. He assumes a squat position with the feet close together and pointing straight ahead, the knees apart and the trunk bent slightly forward. Since all catchers are right-hand throwers, the left arm rests on the left thigh and the glove extends

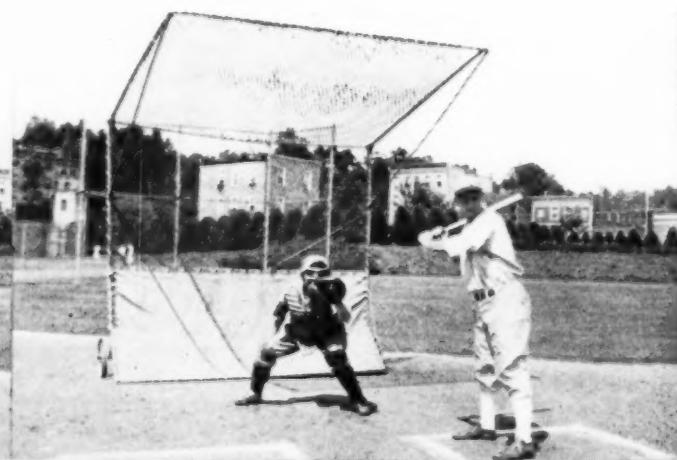
palm inward beyond the knee or close to the body over the signal fingers.

After flashing the sign, the catcher rises to a crouch position. His legs are comfortably spread, the trunk and knees slightly bent and the weight on the balls of the feet, which are usually parallel and on the same plane. Many coaches believe that young catchers derive much more from the potentialities of body balance and weight shift when they take a stance with the left foot slightly in advance of the right. This allows for just that slight difference in weight transference which expedites the shift of feet and body into throwing position.

The idea is to get as close to the batter as possible without interfering with him in any way. The backward flight of foul tips is thus shortened and the chance of luckily catching one is brighter. The close-up position also facilitates the pitcher's control and the handling of curve-ball pitching. Most important of all the advantages of this position, however, is the fact that it af-



SCENE OF WASTE: A batter up at the plate and no one behind it. Our more thorough-going organizers do not waste



such opportunities for practice work. They utilize the batting drills for the training of the catching staff (above).

fords protection against foul tips and low pitches that might ordinarily hit the ground and rebound into a vulnerable spot.

The left is the catching hand; the right (with fingers clenched) is held in readiness to supplement the work of the left. For high inside or outside pitches, the fingers are comfortably spread and pointing upward with the heel of the glove down. On low deliveries, the fingers point downward with the heel of the glove up and toward the body.

The hands give gradually as the ball strikes the mitt; up and in on low pitches and down and in on high deliveries. Pitches that are slightly

will safeguard himself against split fingers and other hand injuries. For example, with the bases unoccupied and less than two strikes on the batter, the receiver may use only the glove to catch the ball.

There are several reasons for habitual fumbling. The catcher may be doing any one or more of the following things: (1) Taking his eyes off the ball. (2) Balancing his weight improperly. (3) Using a mitt that is not broken in. (4) Being hurried by the pitcher (failing to set pace). Occasionally it may be the fault of the pitcher, who may be crossing him up.

To keep his body as much in front

base side of the diamond, the step is sideward to the right with the corresponding foot; on a pitch to the third base side, the catcher steps over with the left foot. On some wide pitches and low ones, the only play is to knock them down or block them. The wide ones can often be stopped by throwing the body toward the ball. The low ones are blocked by falling to the ground on one or both knees.

The catcher is in a position to throw when he does not have to shift for the pitch or when he has to shift to the right, since the weight must be transferred to the right foot anyway. When the pitch is to the left,



AN OPEN HAND with spread fingers is an invitation to danger in the form of split or broken fingers. The receiver should await the delivery with his fingers cupped or rolled into a semi-fist.



SMOTHER the doubtful ones, but above all do not go after them with the unprotected hand. There are many wide pitches and low ones that a catcher can be content to knock down or smother.



AVOID catching from a squat with men on base. Not only is it a poor stance from which to shift into throwing position on attempted steals, but it handcuffs the receiver on most wild pitches.

wide of the plate may be brought over in the same manner. When the pitch is obviously wide, however, the catcher should not pull it in. Umpires resent this practice. On a questionable pitch, it is smarter to lean in with your body and hold the hands where the ball is caught. The glove thus covers a corner of the plate and unless the umpire is in perfect position to call the pitch, he may give the pitcher the benefit of the doubt. Incidental remarks addressed to the pitcher at the time of contact are often helpful, such as "Nice going!" or "That's the stuff!" However, the catcher should be particularly careful not to antagonize the umpire.

In making the actual catch, the receiver may extend his bare hand so that it follows the pitch as it spans into the glove. The moment the ball touches the mitt, the hand is clapped over to smother it. The back of the hand is thus exposed to the pitch but the fingers will give if struck by the ball. Naturally clean handling is of great value in catching, but the boy does not have to make a habit of it. By handling the ball cleanly only when he has to, he

of the ball as possible, the catcher must frequently shift his feet. Deliveries that pass over the plate or just fail to nip the corners may be handled without any change in the regular stance. Pitches that are well outside, however, may be handled more easily by stepping to the side on which the ball is thrown.

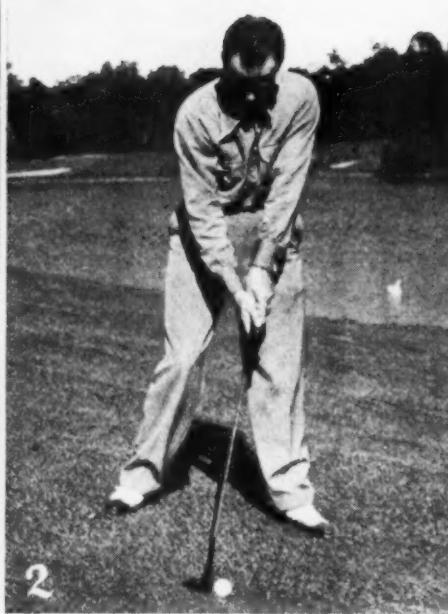
If the pitch is to the right or first

however, it is necessary to shift the weight with a hop, replacing the left foot with the right.

With men on base, the catcher should receive and get into throwing position in almost one motion. It is advisable to grip the ball securely with the index, second finger and thumb, letting the fourth finger act as additional support. The throwing success of a catcher depends not so much on the strength of his arm as it does on his ability to get the ball away quickly and accurately. He should consider every base runner a prospective stealer when the base ahead is unoccupied, and make ready to throw the instant the ball is caught.

Ordinarily, he does not have to shift to make the throw. He merely throws his weight on to the right foot and steps toward the direction of the throw with the opposite foot. The throw is not made with a windup and a complete sweep of the arm. The arm is drawn back and away from the body to about ear level, the wrist is cocked and the ball released with a coordinated whip of the wrist, elbow and forearm.

(Continued on page 30)



On an uphill lie (No. 1), the weight of the body is on the right leg, the stance is slightly closed and the ball is played from between the feet. For a downhill lie (No. 2), the weight

is on the left leg and the ball is played from a position nearer the right foot. When the ball is below the feet on a sidehill lie (No. 3), the stance is open and the hands are kept low.

A HIGH SCHOOL GOLF PROGRAM

By Ben Thomson

Ben Thomson, famous Yale golf coach and author of the text, "How to Play Golf," concludes his series of five articles* with an installment covering (1) common faults, (2) methods of playing difficult lies, and (3) how to choose and prepare a squad for spring matches.

WHEN the pupil has progressed to a point where his swing is becoming natural, I give him a chance to try out the shots under actual playing conditions. Naturally, there will be a great many corrections to make; especially in connection with slicing, pulling and uphill, downhill and sidehill lies—mistakes which can only be corrected out of doors.

The most common fault is slicing. With many players, it is a chronic ailment and has caused more than one golfer to give up the game in disgust. In every case, there is the same contributing factor. The player brings the face of the club across the ball from right to left, giving the ball a clock-wise spin that carries it to the right of the intended line of flight.

There are many faults which will produce a slice; such as a wrong stance, an improper grip, the face of the club striking too openly, starting the back swing wrong, insufficient pivoting or a wrong beginning on the down swing.

*The first installment in November stressed the values of golf, the second covered grip and stance, the third was devoted to the complete swing of the wood clubs, and the fourth covered the short game.



On a sidehill lie with the ball above the feet, the shot is played with a low swing. The stance is closed, the hands are low and the weight forward on the toes. As a rule here, use a short club.

The two most common faults which will cause a slice are:

1. Lifting the club head with the right hand at the beginning of the back swing instead of swinging it in a wide arc with the left arm. When the right hand does the work, the pivoting of the complete left side is retarded.

2. At the beginning of the down swing, the hands may be coming forward, causing the right shoulder to turn too soon. This movement

will cause the club to come down diagonally across the line of flight.

To help stop this forward movement of the hands, I make the pupil keep the right elbow comfortably close to the body throughout the down swing so that the club head may swing into the ball from the inside.

In discussing hooking, I am referring to a "quick hook" or a "smothered ball"; that is, a ball that leaves the club head and flies directly to the left of the fairway. This is not so much a matter of giving a left-hand spin to the ball as it is of coming into the ball with the face of the club head quite closed.

The two faults to look for are:

1. At the beginning of the back swing, the club head may be too much inside; in other words, the arc may be too sharp, so that in the down swing the club head will not have enough room to meet the ball squarely, but will be rolling into the ball and around to the left too sharply.

2. On the down swing, the right elbow may be too far out from the body. This will cause the face of the club to be turned in to the left as the club head comes in contact with the ball.

Many players have difficulty playing a ball that is not on the same level as their feet; that is, when the ball is lying on an uphill slope, a downhill slope, or when the player has to stand above or below it.

A very simple rule to follow, and one which can easily be remembered, is: always allow the club head to follow the contour of the ground.

I cannot give any set rules on how all four of these shots should be played, nor which clubs should be used. Too many elements enter into each shot; such as the degree of the slope, the distance to be played, and other conditions peculiar to each case. However, I shall try to describe as nearly as possible the general method of playing from each position.

When playing from an uphill lie, it is advisable to use a slightly closed stance. The weight of the body will be more on the right foot, and as the right side of the body will be much lower than the left, the back swing will naturally be much lower, or flatter, than ordinary.

The club head as it follows the contour of the ground will be more inside than when on level ground, and the result of the shot will be a pull. Allow, therefore, for the pull by aiming slightly to the right of the intended line of play. After impact, allow the club to swing through with a long sweep up the slope of the hill.

When the ball is to be played from a downhill slope, the stance is almost reversed. Because of the slope of the ground, the weight of the body will be more on the left foot. Naturally there will be less pivot of the left side, and since the club head follows the contour of the ground, the back swing will be more upright than usual.

This means that when the club head strikes the ball there will be a tendency for the ball to slice. The player must allow for the slice by

playing toward the left of the line of play. The club head, still following the slope of the ground, will go on downhill. Care must be taken to let it do so, otherwise the ball will be "scooped" away.

When the ball is below the feet on a sidehill, balance is the most important factor. The weight will naturally be mostly on the toes and, to compensate for this, open the stance slightly.

The tendency when playing this shot is to slice. Therefore, allow for the slice by aiming slightly to the left. It is advisable to use a longer club than usual, and not to pivot or turn the left side as much on the back swing as when playing from the level.

Great care must be taken with



HOOKING: The right elbow is too far out from the body on this shot, and the club head will swing into the ball from the outside instead of from the inside.

the position of the hands when playing a sidehill shot with the ball above the feet. The shot must be played with a flat swing, and the hands must be kept low.

From this position it is desirable generally to use a short club, or to grip well down on whatever club is used. The swing will be much shorter than usual, and since the ball is above you, the club head should swing back low. The result here will again be a pull.

Play all of these shots carefully, study the slope of the ground and play for direction rather than distance.

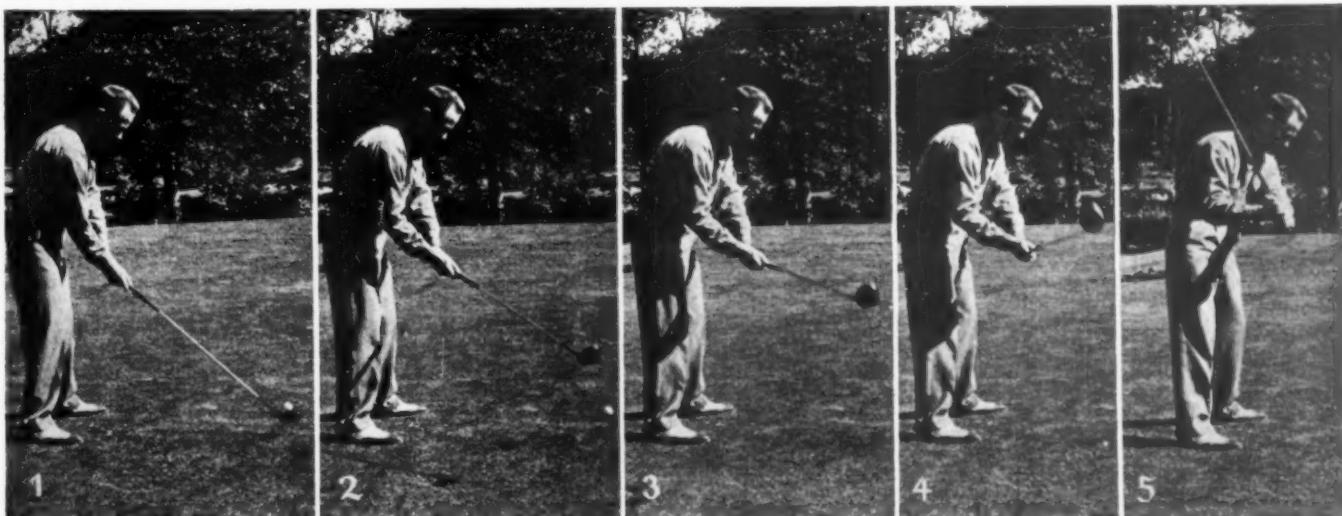
Squad Play

The duty of the golf coach is not confined to teaching beginners and correcting the faults of more advanced pupils; he is also expected to teach a selected group how to play as a team.

There are several methods which the coach may use to pick his squad. One is by medal play; that is, setting a required number of holes to play, usually 36, and counting the total number of strokes. After these 36 holes have been played, the squad may be reduced to ten or twelve players. If the squad is still too large, another 18 holes may be played to eliminate the weaker players.

Another system which is often used is match play against par. This is a fair way of determining the strength of the squad. In medal play one or two bad holes will send the score soaring, and as a result one or two good players may miss qualifying. In match play against par, however, a high score on a single hole merely means losing the hole

(Concluded on page 27)



SLICING: The beginning of the backswing should be a full left-arm movement from the shoulder on down to the hand. When the player lifts the club with the right hand (as in

these pictures) instead of swinging it in a wide arc with the left arm, he retards the necessary pivot of the complete left side and will usually impart a bad slice to the ball.

AQUATIC PROGRAM FOR THE SCHOOL YEAR

By John Y. Squires

John Y. Squires is more than a graduate of the Thomas K. Cureton school of swimming. From 1931-35, Squires swam on the Springfield College teams coached by Cureton and later taught Cureton's aquatic theory courses while the famous coach-kinesiologist-author was away on a furlough. The author, who is the swimming coach and an instructor in physical education at Connecticut State College, believes that a summary of his well-rounded aquatic program will prove of value to high school and college men by giving them a chance to check their own programs with his.

THE catalogue requirement at Connecticut State College includes the swimming of 100 yards or participation in one semester of swimming classes while in college. This option has been granted because it is generally believed that beginner-swimming can be taught in much less time than one semester. The Connecticut requirement is similar to the requirements of many other colleges, universities and even the larger high schools. At Worcester Tech in New England a student must be able to swim before he can return to college for his last year. Other institutions will waive the distance requirement upon the recommendation of the school physician or swimming instructor.

At State, entering freshmen are subjected to a battery of swimming tests during the first week of physical education classes. From the results of these tests, they are segregated according to ability. Non-swimmers (those who cannot swim 100 yards) usually admit to the fact beforehand or are placed in that category after failing to complete the distance.

These tests also give the swimming coach an opportunity to unearth any material of varsity caliber, as the time of each student is taken over 100-yards free style, 20-yards back stroke and 20-yards breast stroke. The test is remarkably easy to administrate and can be done by one man using a two-hand stopwatch. Top speed is not compulsory in the examination but when two boys find themselves starting together the competitive urge is difficult to control and a race usually ensues. The swimmers are requested to refrain from the optional tests (back or breast stroke) if they have never done the stroke before.

Approximately 280 freshmen were tested in the fall of 1938 and graded according to their aquatic ability. Of this class about ten per cent (30 students) did not attempt or failed to swim the 100 yards. The class aver-

Non-swimming freshmen must report to the pool three hours a week for the first six weeks of each semester

age for the 100-yards free style swim was 94.2s., the average for the 20-yards back stroke, 20.7s., and for the 20-yards breast stroke, 19.2s. There were 19 men who did the 100-yards free style in less than 1m.20s. and 30 men who took more than two and a half minutes.

As part of the required physical education for freshmen, the non-swimmers must report to the pool three hours a week for the first six weeks of each semester. At this time, because of the division of the freshmen class into five physical education sections, it is possible to give each student individual attention. In September, 1937, 40 non-swimmers reported to the pool. Of this number only 9 had still to swim the 100 yards in their sophomore year.

The beginner's skills are related to water adjustment, breathing, arm and leg movements, coordination and beginning diving. During the first six weeks of the second semester, the class reviews the beginner's skills and then devotes the remaining weeks to the assimilation of other major strokes, elementary water safety and life saving.

Life-saving courses

After the first six weeks of each semester, the physical education classes are divided and part of the class is sent to the pool for special work over a three-week period. This length of time is usually enough to initiate average swimmers into some of the intermediate swimming skills. Three hours are spent on a review of beginner items, three hours on the teaching of intermediate skills and three hours testing on the latter. In the second semester the intermediate skills are reviewed with emphasis on the learning of elementary dives such as the front and back dives and somersaults. For diversion, simple water games are introduced as a part of several periods.

During the spring courses in life saving are offered to both men and women. These courses follow the new American Red Cross and the new Y.M.C.A. program of teaching. Life saving is naturally a spring activity as it may be taken as preparation for a beach, camp or pool job, or merely for the sake of education in safe swimming and self-satisfaction. Varsity swimmers who have qualified as instructors are used as as-

sistants in the course, which involves 20 hours of work completion. A course for those who wish to become life saving instructors is offered by a visiting national Red Cross instructor during each school year.

Varsity, intramural set-ups

Connecticut State is represented in the New England Intercollegiate Swimming Assn. and has a schedule consisting of eight dual meets and the championship meet. The varsity season extends from November 15 through March 15. The freshmen, who swim against four outside teams during the season, practice three times a week for a month before the Christmas recess and continue daily after vacation until the last meet.

The intramural set-up is admittedly weak, merely consisting of an interfraternity championship meet held in March of each year. Since very little training is undertaken in preparation for this meet, the longest event on the program is the 100-yards free style.

At State the women must take two years of physical education. Those who fail to swim 100 yards are required to take a half semester of swimming in the fall and spring. During the winter months of the second year, swimming is only an elective. Testing of skills is done under four groupings: (1) Stroke form. (2) Number of lengths done, each stroke. (3) Stunts. (4) Elementary diving.

Under this aquatic program both men and women students have separate free hours set aside for them every afternoon. Monday, Wednesday and Friday mornings are reserved for men's classes, and Tuesday, Thursday and Saturday mornings are for the women's classes. From time to time, special groups are allowed supervised evening periods.

The aims of this program, now in its fourth year of operation, have been and are:

1. The improvement of general aquatic skill as a means of enjoying the natural local and state facilities.
2. The preparation of skilled swimmers for beach, pool and camp positions.
3. The development of an interest in competitive aquatics in order to promote, in an indirect fashion, the carry-over values of swimming as a life-long means of recreation.

CONNECTICUT STATE COLLEGE
Long Progressive Swimming Test for Beginners
(Cureton)

In keeping with the Cureton school of swimming, these tests are quite objective in nature and simple to administrate. The skills are arranged to begin with the easiest items and to progress gradually into the more difficult ones. On the original sheets, there are box columns for an entire class.

APPLICATION OF FORCE IN RUNNING

By W. W. Tuttle and G. T. Bresnahan

Where progressive and scientific thought is being applied to the laws of body mechanics, you will usually find Dr. W. W. Tuttle and George T. Bresnahan, two of the nation's most gifted track and field analysts. Both men hail from the University of Iowa, where Dr. Tuttle serves as associate professor and Mr. Bresnahan as track coach and assistant professor of physical education. They have collaborated on an excellent text, "Track and Field Athletics," and are occasional contributors to Scholastic Coach. Their latest bit of research concerns the application of force to the body in running.

IN ORGANIZING a teaching program for track, it must be remembered that running is a basic form of behavior which depends chiefly upon basic reflex response. The basic response may be improved or impeded, but it cannot be fundamentally changed. For this reason, the teaching program should have as its goal the *establishment of proper techniques* rather than the *alteration of basic response mechanisms*.

Although there are many details about running which need further discussion and clarification, there is one point particularly that is a subject of much argumentation; i.e., the manner in which force is applied to the body in its forward propulsion.

The problem of forward propulsion involves three phases: (1) starting the body forward, (2) acceleration or increasing speed, and (3) maintaining speed. We investigated the first phase through experimentation in our laboratories; and it is now possible to give a clear picture of what happens when a runner leaves his marks. Many points of interest were brought to light, but only those having to do with forward propulsion will be considered here.

The application of force to the body in motion was investigated next. The method employed for this purpose consisted of a study of motion pictures of champion runners in competition. By studying the movements of a runner through a complete stride, information was obtained which serves as a basis for the exposition which follows.

Three figures are presented to show how force is applied to the body in running. Fig. 1 shows how the reflex starting pattern is initiated. Fig. 2 shows how force is applied to the body during the transitional strides when the forward movement of the body is accelerated. Fig. 3 shows how force is applied to the body after full speed has been obtained.

Propelling power is applied most effectively when administered directly behind the center of weight

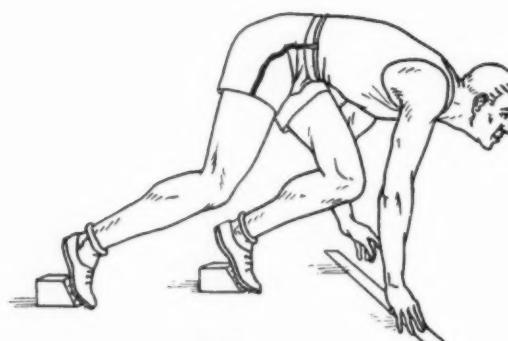


Fig. 1

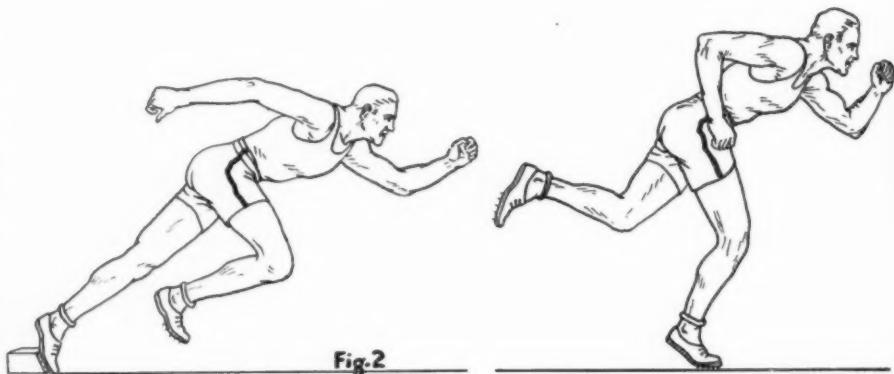


Fig. 2

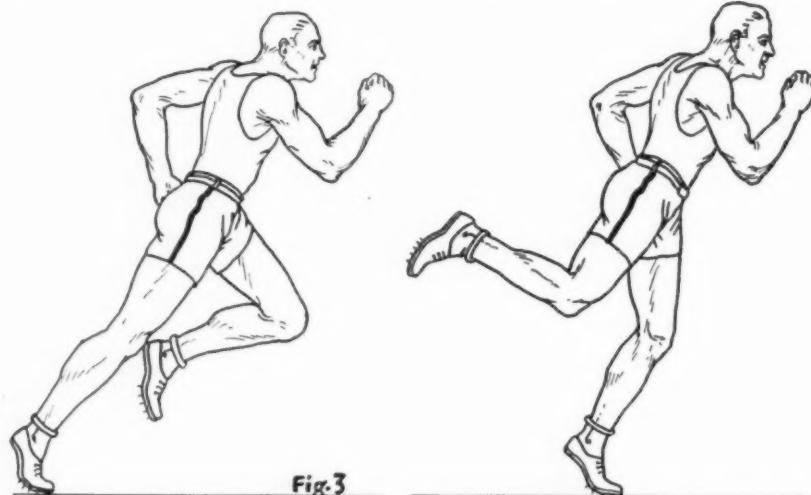
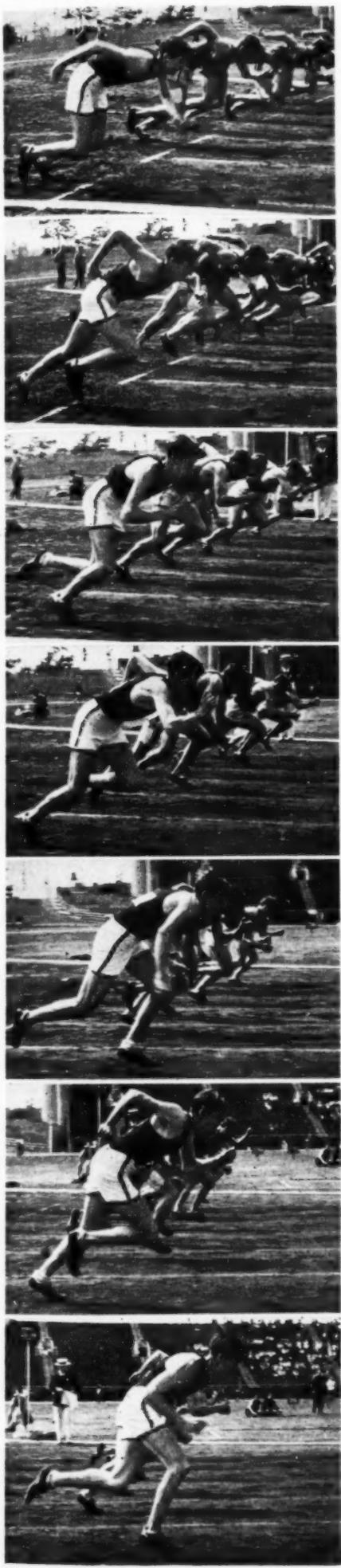


Fig. 3

In running short races it is customary for a sprinter to start from a crouched position. This position furnishes a faster start than a standing position because the forward propelling force is applied to the body more economically. This is true because propelling force is most effectively applied to a body to be moved forward, when applied directly behind the center of weight. Although the force cannot be applied directly behind the center of weight in starting, the crouched start furnishes the nearest approach to this ideal situation.

When a runner is in the "set" position, the only contacts with the track from which forward force can be applied are those made with the feet against the starting blocks. This is true because all other contacts are in front of the center of weight, and therefore could only apply force backwards.

In the "set" position the hands serve as supporting members only, and are not directly concerned with the generation of forward propelling force, since they are in front of the center of weight. When the gun is fired the hands are lifted, thus per-



mitting the body to fall. Soon (about .3 seconds) after the body starts to fall, force is applied from behind the center of weight by both legs in quick succession. The first application of force is by the back leg, this movement being the beginning of the first stride. During the initial stride, which ends when the front foot contacts the track, forward force is applied to the body by both legs, both alternately and simultaneously. This is the only stride during the sprint in which this occurs.

It is evident, then, that all the forward propelling force at the start of a sprint is generated and applied from behind, that is, by the legs, since they are the only members of the body which are behind the center of weight.

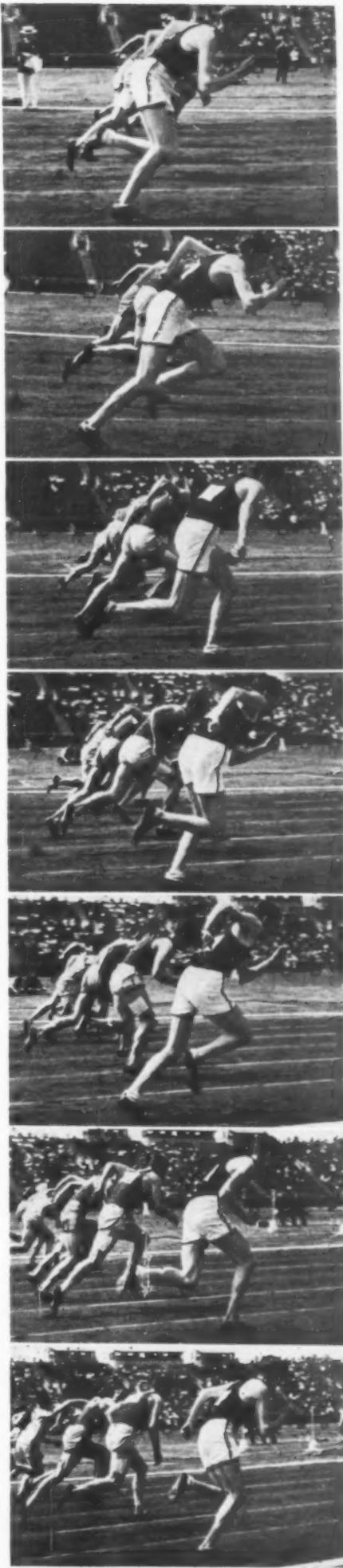
Acceleration of speed

Beginning with the start, and continuing through six to nine strides, there is an increase in speed. This transition from the start to full speed striding consists of lengthening the stride and straightening the trunk angle. At the start, the center of weight is closest to the track and, as a result, the stride length is shortest. As the speed is accelerated, the trunk angle becomes less and the strides become longer, until full speed is obtained. During the transitional period the forward (supporting) foot does not contact the track as it swings backward, until the foot is under the center of weight. Since this is true, the supporting leg can add nothing to forward propulsion until it is behind the center of weight or when it becomes the driving leg. This being the case, forward propulsion during the transitional strides is also a pushing force, and is in no sense a pulling force.

The same laws apply to maintaining speed that operate in starting the body forward and increasing its speed. As soon as full speed striding is attained and the optimum trunk angle established, the body is moved forward by the driving leg. This must be the case, since at no time during a

(Concluded on page 43)

In this sprint start at the I. C. 4-A championships at Randall's Island last summer, the film was exposed at the rate of 16 frames (or pictures) per second. To make up this series, every other frame was developed and enlarged. We are thus able to study the runners over the first five strides of the race. By following the man in the foreground, the observer can see for himself how force is applied to the body. In the second picture, for example, you can see that in the transitional stride the force is applied by the driving leg, since the recovery leg does not contact the track until it is under the center of weight.



THE "ELECTRIC EYE" MEASURES THE JUMPS

By Ralph Colson and Eugene Sullivan

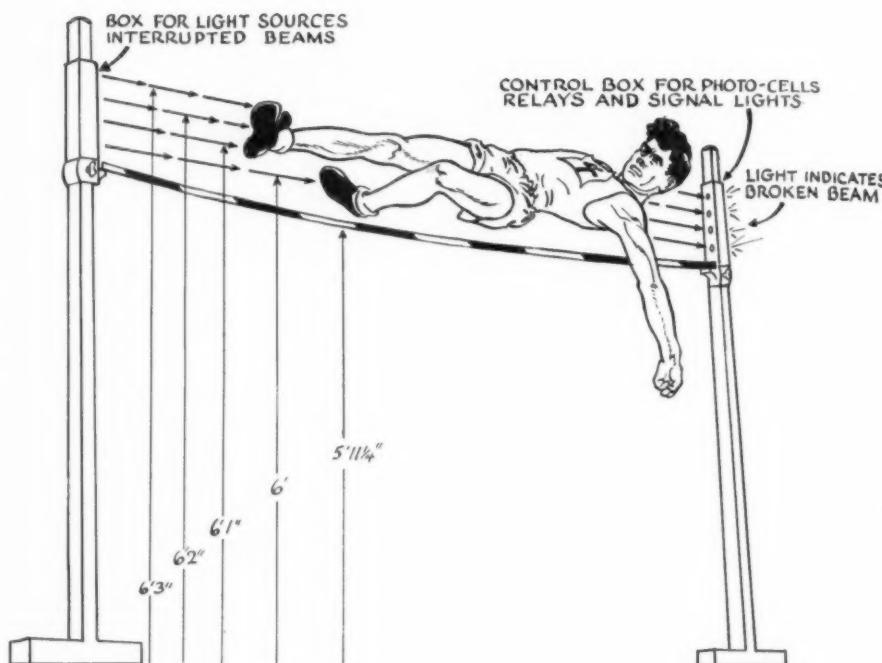
The 15-ft. pole vault and the 7-ft. high jump may not be far off, if Ralph Colson and Eugene Sullivan can rally track coaches and officials to their cause—the precise measurement of height with a photoelectric device. The inventors—Mr. Colson is assistant supervisor of physical education in the Massachusetts department of education and Mr. Sullivan is director of the science department of the State Teachers College in Fitchburg—describe just how their electric eye works.

NOW that man has harnessed electricity to perform much of the world's work, gadgets that figure things out for themselves are performing many complicated tasks as well and in some cases better than human hands. We have seen how electric "brains" open and close doors, throw switches, turn on water faucets, count numbers, and sort good from poor materials. And the time is drawing nigh when the electric eye its wonders will perform in the field of sports.

The most recent invention is a photoelectric method of measuring height in the pole vault and high jump, which will credit the athlete with the height he *actually* clears. Under the system in vogue, if the bar is set at six feet and the jumper clears it by two inches, he receives credit for only six feet, since there is no way of determining the additional clearance. With the electric eye on the job, however, it is possible to establish the exact height of the jump.

The apparatus consists of three rays, one above the other, reaching from one upright to the other. These rays may be adjusted at any height. In the high jump, for instance, the

Photoelectric light beams will credit the athlete with the height he actually clears



No extra credit here: the athlete has broken all the light beams.

rays may be set one inch apart. For pole vaulting, they may be adjusted at intervals of two inches. Each photoelectric cell is connected with a separate signal lamp which lights when its respective ray is broken. Thus, if six-two is cleared in the high jump, the lamp corresponding with the top ray lights. As long as no part of the body breaks a ray, the corresponding lamp remains unlit.

The device is small and will not interfere in any way with the jumper. On one upright are located the three light sources, each consisting of a six-volt, 32- or 50-candle power automobile headlight bulb, mounted in a metal box. The light passes through a lens of a certain strength and focus set in the side of the box. The power for the lights may be furnished by an automobile battery or a 110-volt current through a six-volt transformer.

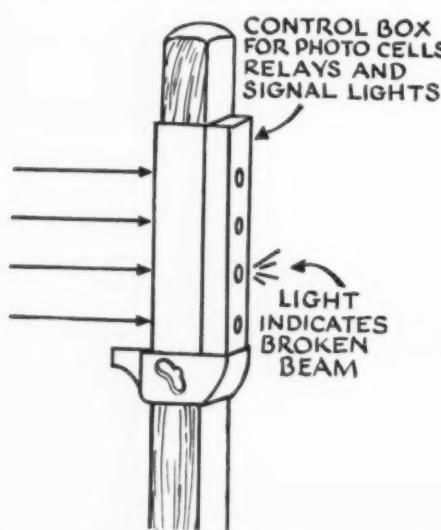
On the other upright is the relay box, in which are located the photoelectric cell, an amplifying tube and a delicately set relay. The light from the light source enters the relay box through an opening one-half by one-inch, thus limiting the active ray to this size, furnishing an ideal crossbar. It hits the photoelectric cell and generates a minute amount of electricity. The current then passes through the amplifying tubes

where its power is increased.

The electric current is now strong enough to excite the relay which closes a circuit (furnished by a dry cell). The dry cell current passes outside of the box, then through another relay which closes a 110-volt circuit, lighting a 110-volt signal lamp. With some relay boxes, a 110-volt circuit can be attached directly to the relay located in the relay box. Thus, on one upright are the light sources and on the other the relay boxes.

The all-seeing electric eye may be instrumental in the establishment of new marks in both the high jump and the pole vault. Many prominent high jumpers have told us they often leap six-eight when the bar is at six-four. But by the time the bar is actually lifted to six-eight, they haven't the power to get up that high. The longer they keep jumping after a certain point the less effective they become. It is simply the law of progressive fatigue. We can prove by slow motion pictures that when Earle Sefton soared 14 ft. 10 in. for a world's record, he actually cleared 15 feet. 3 in.

If necessary the bar may be eliminated entirely. A red, white or blue beam one and one-eighth inches thick (same size as the crossbar) may be run across the uprights and used in its place.



A closeup of the control box with its signal lights to indicate broken beams.



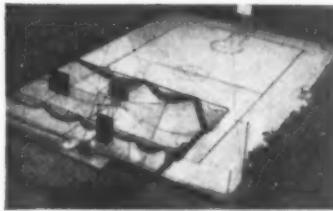
THE SMART mountain climber selects the kind of rope which has helped other men reach the peak. Smart coaches too, heed the advice of our honorable Chinese friend, for when it comes to selecting a gym floor finish, they also use the *tested product*—the finish which other coaches use to reach championship heights.

Take Seal-O-San, for example. Last year, 78% of all tourney winners were coached on Seal-O-San. Nine conference titles and ten State High School championships went to teams taught to play winning basketball on 100% *non-slippery* Seal-O-San floors. All in all, more than 5000 coaches have shown preference for Seal-O-San, with the total steadily increasing.

Such acceptance means that coaches recognize the value of Seal-O-San in developing *sure-footed, faster teams*—teams whose victories bring to the coach advancement and prestige. "TEAM THAT SLIDE ON TAP OFTEN PUT COACH ON SKIDS"

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RUTGERS UNIVERSITY

QUESTIONS

Note: All questions on defense are true or false. Mark "T" or "F" in front of each number.

1. A pitcher with his pivot foot on and in front of the pitching plate can have the other foot anywhere he wishes as long as it is in fair territory.
2. A pitcher can make eleven different kinds of balks.
3. A pitcher can make a balk when the bases are unoccupied.
4. A catcher must be beyond his catching lines as a target when a waste ball is to be caught because the ball must come from the pitcher accurately.
5. A catcher always backs up first base whenever a thrown ball comes to the first baseman; the possible exception being a throw from the pitcher.
6. A catcher fields all bunts:
 - a. Stops its speed with the mitt.
 - b. Picks it up with one hand.
 - c. Picks it up with both the right hand and the mitt.
 - d. Has his back to the first baseman.
 - e. After fielding the ball he swings his body around via third base.
7. A catcher catches all fair and foul fly balls which he can reach.
8. If a third baseman fields a bunted ball, first base being occupied by base runner, the shortstop covers third base.
9. Each player in the infield watches the outfielders make their catches and fielding plays.
10. If a first baseman fields a ground ball too far from the base to tag the bag himself he tosses the ball to his pitcher covering the bag.
11. In fielding the ball, the player lifts his head to see where the base runners are, then makes the throw.
12. Players have their feet together as they field ground balls. Hands are well in front of the feet and the eyes follow the ball until it is firmly held in the hands.
13. Runner on first; batsman hits a fair fly ball just back of the base line very near the first baseman; a double play can be made; the first baseman drops the ball, picks it up, steps on the bag, then touches the base runner.
14. Runners on first and second; one out; batsman hits a high fly ball which will hit the ground on fair territory very near the

first base line between home plate and first base; the umpire shouts "Infield fly" thus retiring the player hitting the ball.

15. A batsman hits a line drive which hits the umpire; the second baseman throws it to the first baseman for an assist.
16. The first throw on a relay from an outfielder to an infielder is the long throw and the ball must be received shoulder high.



Scholastic Coach again takes pleasure in presenting the annual baseball quiz with which John W. "Jack" Coombs stumps his undergraduate experts at Duke University's school of physical education. Coombs, one of the greatest pitchers of all time, is author of the popular coaching volume, "Baseball."

17. The third baseman covers second base whenever the shortstop and the second baseman go back after a fly ball hit back of second base, neither player being able to judge which one can make the catch.
18. Runners on second and third; the runner on second can run to third, touch it and thereby automatically force the runner originally on that base to vacate it.
19. The second baseman on his relay attempting to complete a
- double play hits the umpire in the stomach with the ball; the pitcher retrieves it and can make an assist on a throw to the second baseman.
20. A third baseman catches all fly balls hit over his head or behind him.
21. A runner failed to touch a bag in his effort to reach the base ahead; the umpire can call him out even though his attention is not called to error of judgment committed by the runner.
22. A batsman hits a line drive into the outfield for a hit; on foul territory he turns to the right and comes back to the bag at first.
23. On an attempted double play the second baseman hits the bag with his pivot foot, provided the throw is received letter high and directly over the bag, steps into the diamond with his left foot and throws sidearm across his chest to complete his part in the play.
24. Runners on first and third; heavy batsman up; runner on first attempts a clean steal of second base; the catcher makes a bluff throw to second and throws the ball to third.
25. Runner on first; left-hand hitter at bat; waste ball delivered by the pitcher; throw is made to second base; shortstop makes the put-out.
26. Runners on first and second; catcher throws to first attempting to catch that runner; spectators correctly shouted "That's the way to play the game."
27. A pitched ball hits the umpire on the chest protector; bounds back to the pitcher; runners can advance at their own risk.
28. The measurements between bases have been changed very materially since General Doubleday staked out his first playing field one hundred years ago.
29. Runner on first; batsman singles to right field; pitcher and catcher back up third base; first baseman protects the plate.
30. Runners on first and second; none out; tie score; fourth inning; batsman hits a ground ball to the third baseman who fields it on his left; correct play is to run and touch the bag at third base.
31. Runners on second and third; one out; tie score; ninth inning; batsman hits a ground ball to the shortstop; ball is thrown to the plate for an out; shortstop covers second base.

(Continued on page 20)

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32. Runner on third; one out; fly ball is caught by the left fielder; pitcher and the first baseman back up the catcher.

33. Batsman hits a drive into right field; second baseman goes out for the relay; following instructions for the relay to come to second base, the second baseman throws the ball to the shortstop on a bound.

34. Outfielders take two or three steps after catching or fielding a ball to give more impetus to their throws.

35. Runner on second; batsman steps on the plate as he hits a long drive into left field; both runners have time to cross the plate before the ball is returned to the infield; two runs.

36. Runners on first and second; one out; tie score; sixth inning; batsman hits a hard grounder directly back at the pitcher; first throw is to third base.

37. Batsman hits a drive between the first baseman and the bag into right field; the first baseman acts as the relay man.

38. Base runner is caught between the bases by some defense play; no more than three players should be in the run-up play.

39. Bases full; none out; tie score; fifth inning; fly ball caught by the center fielder; throw is to the plate.

40. Runner on third; left fielder catches a fly ball very near the infield; outfielder runs toward the plate with the ball in his hands.

41. Runner on second; one out; center fielder catches a fly ball; shortstop covers third base.

42. A pitcher hits the bag at first base as he receives a throw from the first baseman and over-runs the bag into foul territory to get away from the player who hit the ball.

43. The second baseman tosses the ball to his shortstop when he is within fifteen feet of the bag as he attempts to make a force.

44. A shortstop throws a ball to the second baseman for a force play; the glove is pulled away from the flight of the ball in order to give the second baseman full view of it.

45. Right hand pitcher pitching; the second baseman always covers second on an attempted steal by a runner from first when:

- Left field hitter is at bat.
- Right field hitter is at bat.
- Curve ball pitched to a right hand batsman.

d. Curve ball pitched to a left hand batsman.

e. Waste ball pitched to a left hand batsman.

f. Waste ball pitched to a right hand batsman.

46. Runner on first in the seventh inning; one out; tie score; slow hit ball back at the pitcher; first out is attempted at second base.

47. Runner on second in the ninth inning; one out; tie score; ball hit at the third baseman; bluff throw is made to first base and run-up play attempted.

48. Runners on first and second in the fifth inning; one out; tie score; batsman hits a high infield fly which can be handled by an infielder; ball is dropped and thrown to third base for a forced play.

49. Runner on third in the eighth inning; one out; tie score; catcher steps in front of the batsman to catch a pitched ball as he anticipates a squeeze play; umpire allows a run to score and the batsman to go to first base.

50. (This question will count 25 points toward perfection on defense play.)

- Three men on bases; first inning; none out; infield plays close.
- Runners on first and third in the second inning; none or one out; no score; infield plays close.
- Runners on second and third in the third inning; none out; your team leading by one run; infield plays close.
- Runner on third in the seventh inning; none out; your team one run ahead; infield plays close.
- Runners on first and third in the seventh inning; none out; your team leading by one run; infield plays close.
- Runners on first and third in the eighth inning; one out; your team one run ahead; infield plays close.
- Runners on first and third in the ninth inning; one out; your team (home team) one run ahead; infield plays close.
- Runner on third in the ninth inning; one out; your team one run ahead; infield plays close.
- Bases full in the ninth inning; one out; your team two runs ahead; infield plays close.

j. Runners on second and third in the ninth inning; one out; your team two runs ahead; infield plays close.

k. Bases full in the eighth inning; one out; your team one run ahead; heavy hitter at bat; infield plays close.

l. Bases full in the ninth inning; none out; your team two runs ahead; infield plays close.

51. Make up a batting order for the typical team that follows:

- Pitcher who hits like all pitchers.
- Catcher, dangerous batsman, left hand batsman, one of the best hitters on the squad, not a fast runner but a fair base runner.
- First baseman, good bunter, fair hit-and-run hitter, apt to miss many balls swung at.
- Second baseman, tall rangy chap, hits the ball hard if he hits it.
- Shortstop, best hitter on the squad, a sharp driving type of a hitter.
- Third baseman, good hitter, good waiter, very fast, excellent base runner.
- Right fielder, large man, long hitter, good base runner, slow on his feet.
- Center fielder, fair hitter, the best hit-and-run batsman on the squad.
- Left fielder, right hand batsman, good waiter, good base runner, good bunter, fair hitter.

Baseball Quiz

inning; one out; tie score; catcher steps in front of the batsman to catch a pitched ball as he anticipates a squeeze play; umpire allows a run to score and the batsman to go to first base.

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- Runners on first and third in the eighth inning; one out; your team one run ahead; infield plays close.
- Runners on first and third in the ninth inning; one out; your team (home team) one run ahead; infield plays close.
- Runner on third in the ninth inning; one out; your team one run ahead; infield plays close.
- Bases full in the ninth inning; one out; your team two runs ahead; infield plays close.

Give your rules or suggestions for the following base-running situations.

52. What will be the very first rule?

53. Bases unoccupied the batsman hits a ball to the outfield.

54. Bases unoccupied the batsman hits a ground ball to one of the infielders.

55. Runner on first base.

- Base hit.
- Lead to obtain from the bag.
- Batsman swings at the third strike which the catcher drops.
- Ground ball is hit to the second baseman on the base line.
- Ground ball hit to the second baseman just back of the base line.
- Infield fly which can be caught by an infielder.

(Continued on page 34)



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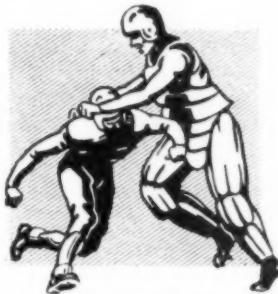
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Bulletin No. 4 (Continued)

Product	GENERAL					VITAMINS					
	Protein	Fat	Carbo-hydrate	Fuel Calories	Serving	A	B	C	D	E	G
Bacon, Star (Armour)	9.9	72.0	0.1	403	1/8 lb.	x	x	xx	x	x	
Beans, Lima	7.5	0.8	23.5	100	1/3 cup	xx	x	xx		xx	
Beans with pork & tomato sauce (Heinz)	6.3	2.1	21.0	220	3/4 cup	xx	xx				
Beans, Baked Boston Style (Heinz)	5.3	3.8	18.8	228	3/4 cup						
Beets	1.6	0.1	9.7	25	1 med. beet	x					
Bread, Rye	9.0	0.6	53.2	76	2 slices 1" thick	x					x
Bread, Whole Wheat	9.7	0.9	49.7	40	1 slice 1" thick	x	xx				x
Bread, White (Wonder)	8.53	3.86	49.20	150	2 slices 1/2" thick	x					
Broccoli	4.4	0.7	2.2	21.26	1/4 cup	xxx	xx	xx			xx
Brussel Sprouts	4.2	0.5	8.0	56	1/4 cup	x	xx	xx			
Butter, Brookfield (Swift)	0.7-1.1	80.1	Tr.	50	1 sq. 1 1/4 x 1 1/4 x 1/4	xxx					
Carrots, chopped (Heinz)	0.9	0.1	0.5	42	3/4 cup	xxx	x				x
Carrots, homogenized (Libby)	0.75	0.05	5.31	27	1/2 cup	xxx	x				x
Celery	1.1	0.1	3.3	25	4 stalks	x	xx	xx			xx
Cheese, American (Kraft)	22.5	31.0		96	1 1/8" cube	xxx					xx
Cheese, Phila. Cream	6.57	39.0	1.55	50	2 x 1 x 3/8	xxx					xx
Cheese, Velveeta (Kraft)	18.0	23.3	6.75	84	1 1/8" cube	xxx					xxx
Corn, fresh	3.7	1.2	20.5	50	1 ear 6" long	x	x	x			x
Corn (Del Maiz)	2.7	0.9	20.4	75	1/3 cup	xxx	xx	xx			
Creamed Tomato & Rice (Heinz)	2.1	2.2	4.2	116	1/2 cup	xxx	x	xx			xx
Creamed Diced Vegetables (Heinz)	2.1	1.2	6.3	64	1/2 cup						xx
Creamed Green Vegetable (Heinz)	2.6	2.6	3.2	64	1/2 cup	xx	x				xx
Chopped Mixed Vegetable (Heinz)	0.8	0.1	5.0	40	1/2 cup	xxx	x				x
Eggs	13.4	10.5		70	1 egg	xxx	xx			xx	xxx
Eggplant, fresh	1.2	0.3	5.1	50	3 slices 4" x 1/2" thick	x	x	x			x
Gelatine (Knox unflavored)	85.	.1—			1 envelope						
Lettuce, fresh	1.2	0.3	2.9	20	1/2 cup	x	xx	xxx			x
Macaroni (Beech Nut)	13.4	0.9	74.1	18.3	3/4 cup cooked	xx					
MEATS											
Beef, corned	15.6	26.2		100	sl. 4 1/2 x 1 1/2 x 1/4	x	xx	x	x		xx
Beef, steak	18.9	18.5		100	sl. 3" diameter						
Beef, loin	19.7	12.7		100	1/3" thick	x	xx	x	x		xx
Chicken	21.5	2.5		76	sl. 2 x 1 1/2 x 3/4	x	xx	x	x		xx
Hams, Premium (Swift)	19.8	20.8	1.5	150	1/4 cup	x	xx	x			xx
Milk, Choc. (Hershey)	8.20	33.7	55.87	159	1 oz.	xxx					x
Mushrooms, fresh	3.5	0.4	6.8	48	1/8 lb.						
Niblets (Del Maiz)	1.0	1.4	22.6	199.2	1/2 cup						
Peanuts (Planters)	25.8	38.6	24.4	160	1/4 cup	x	xx				x
Peas (Del Monte)	3.6	.2	9.8	94.50	1 oz.	xx	xx	xx			
Peanut Butter (Heinz)	25.2	48.9	17.5	178	3/4 cup						
Potatoes, white	2.2	0.1	18.4	87	2 tbsp.						
Potatoes, sweet	1.8	0.7	27.4	130	1/2 cup	x	xx	xx			x
Radishes	1.3	0.1	5.8	31	1/2 cup	x	xx	xx			x
Salmon, sockeye (canned)	20.80	11.22		53.7	1/8 cup						
Salmon, pink (canned)	21.40	6.99		43.5	1/8 cup						
SOUP											
Asparagus (Campbell)	1.3	1.2	7.1	143	1 can	Not Given					
Beef (Campbell)	7.1	1.8	8.8	256	1 can	Not Given					
Chicken (Campbell)	3.7	1.3	2.7	120	1 can	Not Given					
Consomme (Campbell)	5.8		.1	75	1 can	Not Given					
Cream of Mushroom (Heinz)	2.4	4.4	3.7	196.9	1 can	xx	x				xx
Pea (Campbell)	6.4	2.1	19.0	385	1 can	Not Given					
Scotch Broth (Campbell)	4.0	2.4	9.3	240	1 can	Not Given					
Tomato (Campbell)	1.6	1.5	9.0	179	1 can	Not Given					
Vegetable (Campbell)	3.8	1.4	12.4	249	1 can	Not Given					
Vegetable (Heinz)	1.4	0.9	6.9	126	1 can	x	x	x			x
Cream of Tomato (Heinz)	1.2	2.4	9.0	191.3	1 can	xx	xx	x			x
Spaghetti (Heinz)	2.1	0.5	12.2	108	3/4 cup	xx	xx	x			
Spinach, chopped (Heinz)	1.8	0.2	1.3	40	1/2 pound	xxx	x				xxx
Spinach, fresh	2.3	0.3	3.2	25	3.53 oz.						
String Beans (Del Monte)	1.1	.1	3.8	47.5	1/2 lb.	x	x	xx			
String Beans, fresh	2.4	0.2	7.7	42	3.53 oz.						
Tomatoes	1.2	.2	4.0	52.5	1/2 lb.	x	x	xxx			xx
Vegetable Combination No. 1 (Libby)	2.1	0.1	6.3	73.6	1/2 lb.	xx	xx	x			xx
Vegetable Combination No. 2 (Libby)	0.9	0.1	4.2	44.8	1/2 lb.	xxx	xx	x			x
Vegetable Combination No. 3 (Libby)	2.0	0.2	5.2	64	1/2 lb.	xxx	xx	x			xx

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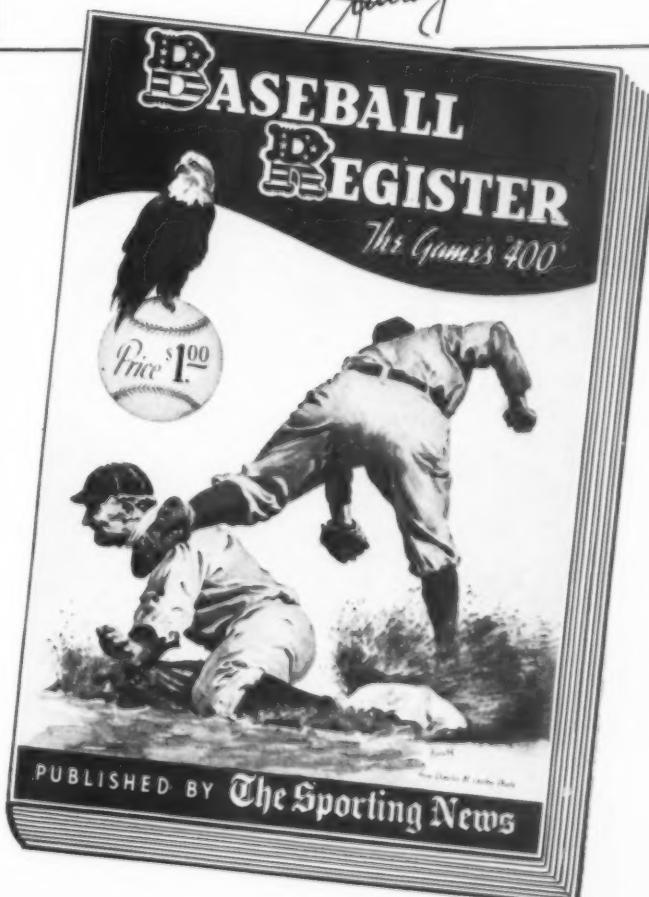
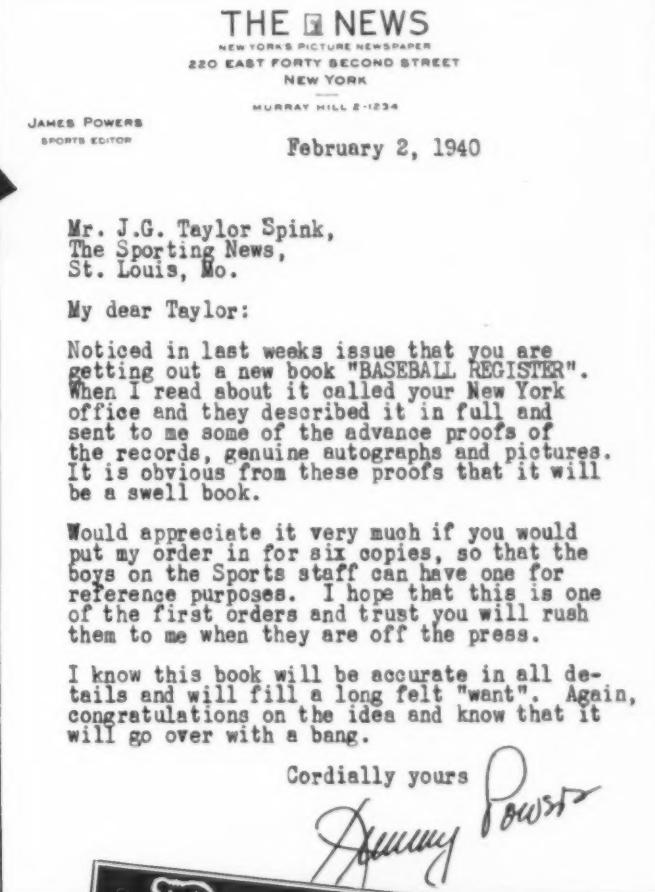
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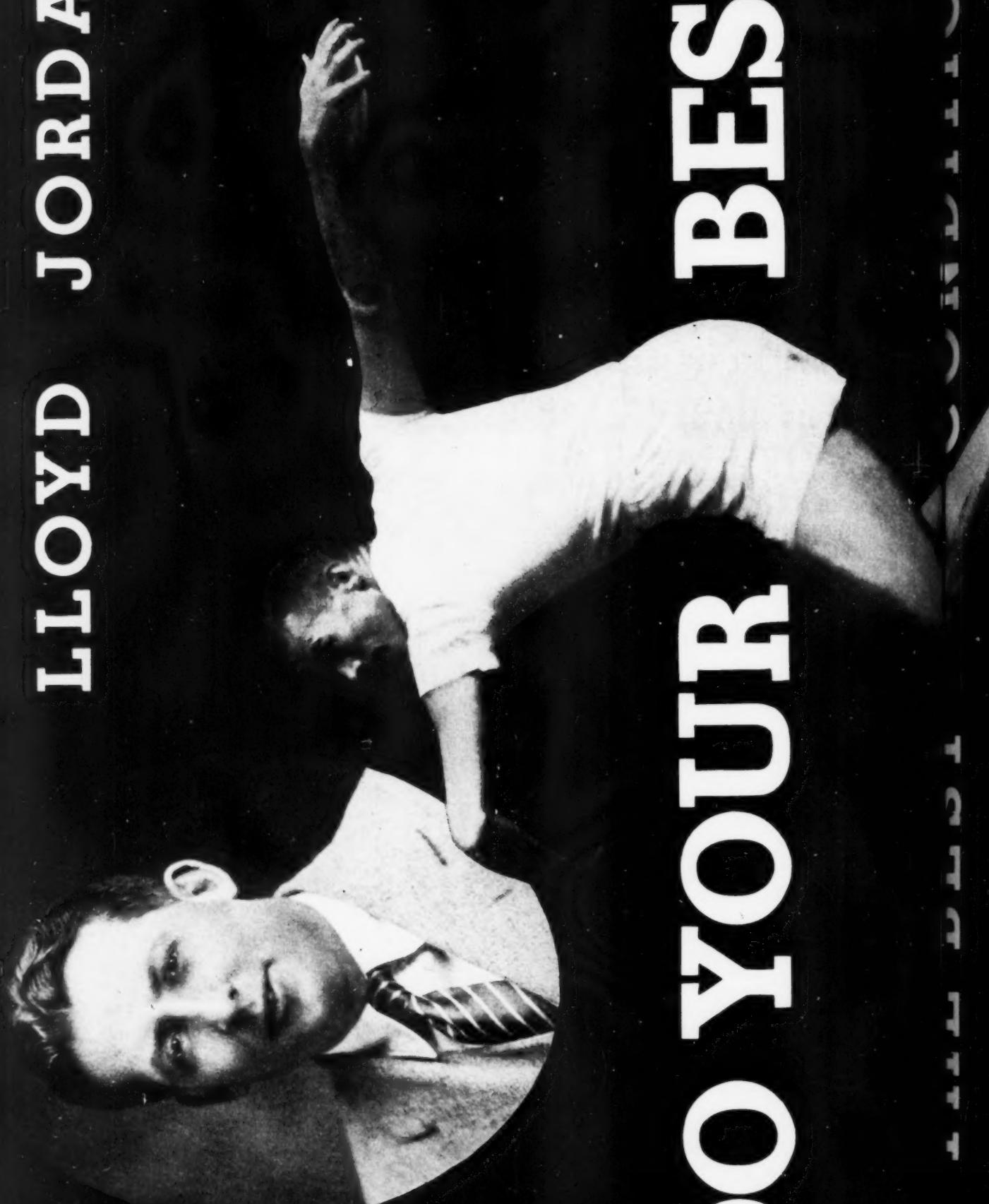
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GLENN H. MORRIS, Director

"IT PAYS TO PLAY"

School Golf Program

(Continued from page 11)

to par. I believe in this system and favor it, for the simple reason that all matches in the early Spring are scored as match-play, and it is the players who can excel in this type of play who will be the most useful to the team.

Assuming the coach has picked his squad, his next step is to find which combination of players will be the best. It does not always hold true that his best players, taken in rotation, will play best together as a team; for example, taking the best player as number 1, and so on down the line, until the weakest man is playing in the last position.

As a rule, however, the strongest combinations will be the first two pairs. I also make sure to pair off another good man with the weakest member of the team. In this way, each player is strong enough to give his opponent a battle and at the same time help out his partner in the foursome match.

Competitive golf systems

At this point, it may be well to explain the procedure in competitive golf. Different systems of scoring to decide the winning team are used throughout the country. In the East, all teams consist of six men, and all matches are played in foursomes. It is possible to score three points in each foursome. One point is awarded to the winners of each of the individual matches, and one for the best ball, making a total of nine points for the complete three matches. To avoid any dispute, all halved matches on the last hole are played to a finish, which means that there must be a winning team.

In other parts of the country, the Nassau system is used; that is, a point is given at the end of each nine holes to the winner of each match, single and best ball.

On many occasions I have seen teams placed with the number 1 man playing in his regular position and a weaker man as his partner, and so on down the line to the last combination. This procedure may have to be followed out in cases where there are no more than two or three strong players on the team. But it places too much responsibility on the shoulders of the strong player, who, instead of concentrating on his own individual problems, has also to worry about the best ball. Never split a combination which plays well together, even though it might help a weaker combination.

Some players play much better with a partner in whom they have confidence, and though they may not be the best individual players, their teamwork will be strong.

Team play is like other forms of competitive golf—a player cannot be timid; he must be bold and always be up to the cup. Following are a few valuable hints which will help both the good player and the beginner:

1. Many players have difficulty in keeping their balance when in the act of hitting the ball. This is most generally caused by hitting too soon from the top of the back swing, instead of delaying the hitting power (that is, keeping the wrists cocked) till the hands are almost waist high. To help prevent this, have the player stand with both feet together and the heels touching. It will be found that when the hit is started too soon the weight of the body is thrown forward onto the toes, but when the hit is delayed, the weight will be kept back on the heels.

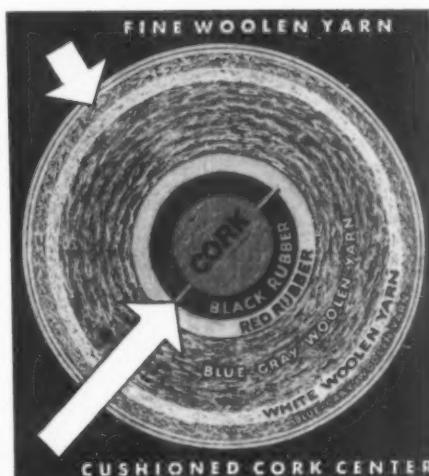
2. Stress the use of the left arm. The left arm not only controls the length of the back swing, but also the speed of the complete swing. No swing should be any faster than the left arm will allow.

3. To play a pitch-and-run shot, or any type of shot which requires the ball to roll after hitting the ground, keep the club head fairly close to the ground on the back swing, and close the face of the club slightly.

4. When the ball must rise sharply and stop when it hits the green, the club head on the back swing must leave the ball in a sharp upright angle and the hit must be a descending one. The club should hit the ball first and continue through to the turf immediately beyond the ball. This can be made easy by simply pushing the hands slightly ahead to the left before the beginning of the back swing.

5. Never fight a wind by swinging fast; rather, take more time and swing much slower than usual. Speed is not essential when playing into a head wind: a slow, deliberate stroke is preferable.

6. Slicing isn't always an evil. It is a necessity at times. To play an intentional slice, simply open the stance slightly more than usual, allow the backswing to be more on the outside of the true line to the hole, and make the pivoting of the left side less pronounced than in a regular swing.



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GIRLS' VOLLEYBALL OFFICIATING

By Norma M. Leavitt

Norma M. Leavitt, of the University of Missouri, is chairman of the volleyball committee of the National Section on Women's Athletics. Her suggestions on officiating are condensed from her article in the volleyball section of the women's official softball and volleyball guide (New York: A. S. Barnes & Co. 25c).

WHILE VOLLEYBALL has emerged as a full-fledged member of the physical education and intramural game families, the caliber of officiating is still not what it ought to be.* As in most fast growing games, officiating procedure has not kept pace with the advances in playing technique.

The official rules indicate only a few of the techniques necessary for adequate officiating. Much is inferred, but there is no help for the inexperienced official. It is for this purpose that the following suggestions are offered.

According to the rules, the referee must station herself at one end of the net in a position that will afford a commanding view of both courts. If she can take a position in which her eyes are from two to three feet above the net, she will have an excellent vantage ground from which to watch the action. The umpire deploys herself on the opposite side of the court, and concentrates her at-

*The women's volleyball committee is now leaving no stone unturned in an effort to raise the level of officiating and to standardize procedure. Theory tests and practical rating plans have been prepared and distributed to every officials board affiliated with the national organization.

tention on plays and players at the net.

Location and height of position are important. Only by being advantageously situated can the official follow close play on both sides of the net. A stand for the referee may be inexpensively constructed by the local carpenter.

The official should wear appropriate clothing, have a rulebook handy for emergencies and a whistle. The whistle should be kept in the mouth and sounded simultaneously with the foul or play involved.

In addition to blowing the whistle and vocally announcing her decision, the official may employ arm signals to make the decision clearer to the players, spectators and other officials. The following arm signals are suggested:

Point. Raise arm and point index finger toward team which has scored. If it is the team on the right, use the right arm; for the team on the left, use the left arm.

Side out. Raise arm nearest the side which has been serving, and describe a semi-circle in the direction of the team that will receive the ball for service.

Time out. Extend both arms to the side at right angles to the body, fingers extended, each hand pointing toward a team. Indicate the team requesting the time out by pointing toward them and dropping the other arm to the side.

Ball touched by more than three

players on a team. Raise arm vertically with four fingers extended.

Striking the ball more than twice in succession. Raise arm vertically with two fingers extended.

Stepping over center line. Point index finger toward center line.

Contact with net by player. Strike top of net with hand.

Caught or held ball. Hold arm out in front, bent at elbows, and flex hand back and forth.

Ball touching player other than on hands. Indicate by touching self where ball touched the player.

Pushing ball (into the net or in play). Pushing motion with one hand out in front.

Ball landing close to line. Thumb up over shoulder to indicate "out"; palms down, fingers spread, to indicate "good."

These signals cover the most common fouls. For other fouls such as illegal service, coaching from the sidelines, persistent delay of the game, etc., the referee should blow her whistle and announce the foul.

Preliminaries for the game

1. See that the net is the proper height and is as taut as possible. Inspect the lacing and inflation of the ball, or balls, to be used.

2. Meet the linesmen and be sure they understand their duties in calling balls landing near the lines, in assisting the scorers by seeing that players follow the serving order and rotate in service (they should have

a record of the serving order for this purpose), and are ready to help the referee make decisions on faults in serving. Linesmen should have whistles to aid them in stopping the game and rendering decisions promptly.

3. Make sure the scorers are on the referee's side of the court, out of the way of play. Explain signals to be used by the officials. Be sure the scorers understand the substitute rule and the necessity for notifying the referee if a player enters the game a third time. Ask them to keep a record of each team's "time outs" and to notify the referee when a team has taken the two that are permitted without penalty. Check the official scorer to see that she has the line up of both teams and the serving order. The scorer must see that the proper serving order and rotation in service are observed, and notify the referee of any error. Scorers should be equipped with a horn or whistle different in tone from that of the other officials.

4. Instruct the timer to keep close watch on the playing time and to deduct the time consumed by stoppage on the referee's order. Ask her to blow a whistle at the end of the playing time in each half and at the expiration of rest time outs taken by a team. The stopwatch should be stopped when "time out" is called by the referee and started again only when she blows her whistle for "time in." Time out periods may be kept on another watch.

5. Discuss briefly with the umpire her specific duties. She assists by making decisions on players crossing the center line, touching the net and in any other manner requested by the referee.

6. Introduce the captains and let them toss for court or service. Give the players a chance to ask questions on rule interpretations, local boundaries, ground rules, and other matters before the game is started.

7. Have the captains toss before the game for choice as to method of play in each half if the teams do not play the same way. Such decision refers to rotation and non-rotation play, assisted and unassisted serve.

8. Be sure the timer, scorers, captains, and teams are ready before starting the game.

9. Educate players to call their own fouls, particularly in cases where it may be a difficult decision for the official in charge. Although this should be a part of a teaching or coaching procedure, officials can also help in this training for sportsmanship by encouraging each player to call or indicate any foul in which she may be involved.

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Catching

(Continued from page 9)

With a right-handed batter up and a runner on second base, the batter will ordinarily be in line with the catcher's vision on an attempted steal. The catcher must therefore take a stance which will enable him to keep in the clear. This position may be assumed before the ball is delivered or at the time the pitch is caught. By taking his position beforehand, the catcher can stalemate any move the batter makes to protect the runner.

With a left-handed batter up and a runner on first base, the catcher may use the same stance to foil any attempt to steal. In this contingency, many catchers signal for a high inside pitch. The pitcher "knocks down" the batter and the catcher has an unobstructed shot at the runner. With this type of strategy, the catcher does not have to shift out of his normal stance.

With a right-handed batter up and a runner on third base, the catcher usually plays deep. This gives him a view of the runner at all times. He is ready to make a quick throw or to follow the runner if he breaks on a squeeze play. When a left-handed batter is up and third is occupied, the catcher moves closer to the plate.

With men on bases, the catcher should not lob the ball back to the catcher, and give the runners a chance to go down. He should know the count on the batter and have the right move on his fingertips. A smart base runner knows his chance of stealing is greater when the batter is ahead of the pitcher. The pitcher is bearing down on the hitter and usually does not concentrate as much on the runner as he should. In this situation, the batter is able to help the runner by taking a cut, feigning a bunt or pivoting.

In the beginning, the catcher should work for control. He should deliberate on his throws and emphasize accuracy and consideration for the receiver. A hurried strong-arm throw not only often misses its mark but is difficult for the baseman to handle.

Plays at the plate

The catcher cannot afford to make any mistakes on plays at the plate. When an infielder messes up a play, there is always another play to make up for it. The catcher does not get any second chances. When he misses a throw or fails to tag a man, the damage is irrevocable. The run scores and nothing can be done about it.

There are two possible plays at the plate: a force and a tag. On force plays, the catcher's footwork resembles a first baseman's. He jumps in front of the plate and doesn't tag up until he is sure of the throw. On a throw to the right, for example, he steps sideward with the right foot and tags up with the left. In the event of a close play with a good peg on the way, he tags up with the right foot and stretches well out with the left foot.

When there is no force play and the runner must be tagged, the catcher should take a position facing the thrower. If the throw is from the right field side of second base, he should stand on the third base side of the plate in foul territory. When the throw comes from the other side of second base, his play should be made from the first base side of the plate in fair territory. Upon receiving the throw, the catcher drops to the knee farthest removed from the plate and places his glove to the inside of his planted foot. Or he may drop to both knees, and place his hands on the ground in front of them. This method of making the tag protects the catcher against injury.

Reminders

As part of the pre-season preparation, harden the hands and get the legs in condition. Hiking, knee bending, duck walking, and rope jumping are good exercises for this purpose.

Before the game, show plenty of pepper in the infield workout. If you don't feel loose, ease up on your throwing in the first round. The second-string catcher should warm up the starting pitcher while the varsity man is working with the infield. The first stringer relieves him as soon as he can get away.

Because of the energy he expends in his work, the catcher should not be used for coaching assignments on the baselines. In working double headers, pace yourself. Avoid playing yourself out in the first game. A change of hose and shoes during the intermission will provide welcome relief.

A catcher cannot be at his best when an infielder or outfielder with no pitching experience is called upon to take over the mound assignment. This sort of practice seldom pays dividends. Spending a day in the dirt is a disheartening experience for a catcher and takes the edge off his appetite for the work. It is not fair to the pitcher as well. He may incur an arm injury because of his ignorance of the position and his over-zealous efforts to make a good impression on the coach.

In his installment next month, the author will discuss signals, targets, sizing up batters, and the technique of fielding flies and bunts.

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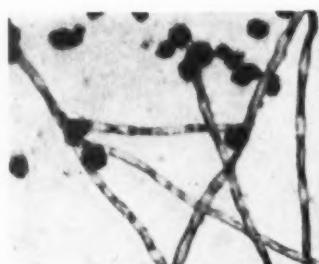


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A Streamlined Track Meet

By Howard G. Richardson

Ridgewood, N. J., High School experimented with a new type of track program last spring which featured a series of eight events in place of the standard field events and hurdles. Howard G. Richardson, Ridgewood's director of physical education, discusses the reasons for eliminating so many of the field events, and why he believes this type of program will furnish more action and crowd appeal.

ALTHOUGH track is past its growing pains as a major high school sport, many schools are finding it difficult to make the sport pay for itself. In many schools, it is considered a moral victory when enough spectators turn out to defray the expenses of a meet. The reason for this spectator apathy at the box office may lie in the program of events. The average track enthusiast likes plenty of action and becomes restless and annoyed at the length of the average dual meet. Hence, it may be a strategic move on the part of meet sponsors to lop off several of the less interesting, drawn out events and substitute more colorful and exciting ones.

Here at Ridgewood we have always considered the field events the "poor relations" of the sport. Not only do we think most of these events lack luster and take too long to run off, but also believe them to be highly dangerous. This is especially true of the discus and javelin. These events are perilous activities to conduct on a public or school athletic field, where both the spectators and athletes are always in danger of being hit by a stray missile. In keeping with a trend throughout the country, Ridgewood High School revised its track program. The shot put, the discus and pole vault were eliminated because we felt these activities were not adapted to the high school athlete.

To take up the slack we introduced an extensive series of relays. At first we did not know whether other schools would be willing to try out our program, but we sought their cooperation. After much correspondence we were able to arrange five quadrangular meets, and one large Ridgewood Relay Carnival. It is gratifying to report that all the schools that participated, in our new program expressed their delight with it, and eagerness to join us again this spring. The boys themselves were completely satisfied and endorsed the program whole-heartedly.

Our program last spring looked like this: 100- and 220-yard dashes; the 440, 880 and mile runs, and a series of eight relays. The Ridgewood track is one-fifth of a mile to the

lap, and these races were held:

1. One lap relay (4-1/4 lap), each boy runs 88 yards.
2. Two lap relay (4-1/2 lap), each boy runs 176 yards.
3. Four lap relay (4-1 lap), each boy runs 352 yards.
4. Eight lap relay (4-2 laps), each boy runs 704 yards.
5. Sixteen lap relay (4-4 laps), each boy runs 4/5 of a mile.
6. Distance medley (3 laps—1 lap—2 laps—4 laps).
7. Sprint medley (2 laps—1/2 lap—1 lap).
8. Shuttle low hurdle relay (4-120 yd. low hurdles).

Upon studying this program, you will see that the running distances are conformable with the standard distances and are thus suitable for training purposes. For example, the one lap relay (each boy runs 88 yards) is a fine race to develop the 100-yard dash men. You can take any of the relays and see how it is planned to develop a certain type of runner. Schools which have the standard quarter mile track can use the same set-up, but with the boys running the accepted distances.

Teamwork stressed

Since the relays stress teamwork rather than individual effort, we believe our refurbished program shifts the emphasis of the sport from individual to group effort. The concentration of a large squad of boys, pooling their efforts as a group, tends to develop sportsmanship and cooperation beyond the scope of the present type of meet.

The old guard may voice some objection to the new type program on the grounds that a track meet without most of the field events is not a track meet. But there must always be a change when progress is manifested. We believe our change will be for the good. A small group of field specialists may be deprived of a chance to compete, but the increased number of relay events will more than compensate for this. The coach will have to carry a larger squad and use practically every man he has.

There are several other advantages to a program that stresses running events. Many high schools with limited space for track practice may solve the problem by simply eliminating the objectionable field events. After all, it is the duty of the athletic director and coach to organize the use of the athletic fields to their

maximum capacity for service. If he feels that a larger group would make better use of the space needed to promote field events safely it seems logical to take the space away from the specialists and to turn it over to the larger number of participants, whatever the activity may be—varsity or intramural.

The elimination of the dangerous field events will also alleviate some of the coach's responsibility in regard to accidents. It is almost impossible for a coach to supervise all the track activities at once. And since a time schedule for the various field events is not practical for the high school practice session, it is up to the coach to adopt activities which can be properly supervised and which are suitable to the environment.

There is no reason why a school has to eliminate the high jump and the running broad jump as we did at Ridgewood. We dropped the broad jump because it is a sprinter's paradise, involving a skill that is already provided for in the program. In time, we may put it back in the program, along with the high jump. Meanwhile, we'll string along with the program the way it is. Our main concern was the elimination of the shot put, the discus and the javelin, and we feel we have made a step in the right direction.

How High Is "Up"

HOW high is "up" for a high jumper? This question has puzzled track and field coaches for years but Thomas Wu, a graduate student from China at the University of Iowa, supplied the answer after a series of careful tests and measurements.

Wu, a native of Putien, China, has developed a formula for predicting the ability of high jumpers that will make it a fairly simple job for the high school and college coach to weed-out the hopeless material from the promising. Ordinarily this is a long and painstaking task.

Under the direction of Dr. C. H. McCloy of the physical education department, Wu used 40 University of Iowa students in his experiments. Seventeen of the men were athletes on varsity squads, the other 33 participated in athletics only occasionally. All of them, however, were able to high jump at least 4 ft., 10 in.

The men were measured and run through a series of tests. At the conclusion of the tests, Wu was able to tell why some men can clear the bar at well over six feet and others can jump no higher than their knees.

Wu found that good jumpers are usually tall and are long of leg and

short of body. Their arm development is not as great as that of other types of athletes. They have high arches, are usually good broad jumpers and, probably most important of all, they have a great deal of "explosive" energy in the muscles of their feet.

How did the young Chinese student arrive at his conclusions? He measured the height of the athletes, both standing up and sitting down, the length of their feet, the height of their hip bones, the girth of their forearms and upper arms and the length of the lower leg.

Included in the tests he gave the men, were the high jump, the standing broad jump and the standing and running Sargent jump. The Sargent is much like the center jump of basketball, the object being to raise the top of the head to the highest possible point of elevation.

Wu's records were computed and organized in the form of statistics. The figures determine to a fair degree of accuracy the height which a person may be expected to attain with a minimum of training. Thus a track coach can determine, in one or two afternoons' work, facts that might take months to learn through the trial and error method.

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Baseball Quiz

(Continued from page 20)

- g. Long hit on which an outfielder has to run back.
- h. Short hit just back of the infield on which an outfielder comes forward as fast as possible attempting to make the catch.
- i. Drive which the batsman thinks is going to be a hit but on which the runner remains very near to the bag.
- j. Hit-and-run play is on, batsman hits a long fly ball to the outfield, player makes a one hand catch, runner is far beyond second base.
56. Runners on first and third.
 - a. Ball hit to the infield none or one out.
 - b. Fair infield fly which can be caught by the second baseman.
 - c. Fly ball hit to the outfield for the second out.
 - d. One out, infield playing close, tie score in the ninth inning.
57. Runners on second and third.
 - a. One out, ball hit to the shortstop, the throw is to the plate.
 - b. Fly ball hit to the outfield for the second out.
 - c. Fair ball which hits the runner attempting to go from second to third base.
 - d. Fair fly ball which can be caught by the third baseman.
 - e. Run-up play which ends with both runners on third base.
 - f. Lead for the runners to take off the bases.
 - g. Batsman hits a ball to the infield with one out.

Answers

1. Foot can be back but not on the side of the pitching plate (Rule 27).
2. Correct (Rule 31).
3. Not a balk—an illegal pitch (Rule 29).
4. A balk against the pitcher (Rule 47, Sec. 9; Rule 31, Sec. 9).
5. Not with runners on scoring position bases.
6. (a) Correct; (b) False; (c) Correct; (d) False; (e) False.
7. Catchers catch all balls the infielders cannot reach.
8. Catcher covers third base.
9. Infielders watch the runners in order to see that they touch the bases.
10. Throws rather than tosses the ball.

JACK COOMBS

... gives you some valuable coaching material in this issue's Baseball Quiz—But why not give your candidates the complete course with which he develops championship teams at Duke University? You can do it with his

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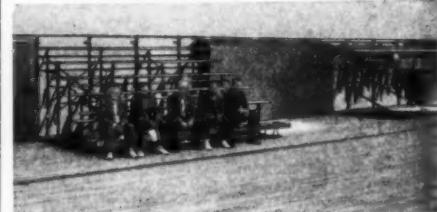
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11. There should be no hesitation whatever. Correct play to make should be in mind before the ball is even pitched.
12. Body well balanced on the feet, hands in front and the eyes never leave the ball until it is firmly held in the hands.
13. Touches the runner then the bag (Rule 45, Sec. 1).
14. Not an infield fly; may roll foul; must be touched by an infielder in fair territory to make it a fair ball or it must settle within the foul lines on fair territory, in order to make it an infield fly. Umpire should have shouted "Infield fly if fair."
15. Ball is dead; no play can be made (Rule 48, Sec. 6).
16. Correct.
17. Correct unless there is some play which can be made on a runner coming to third base.
18. Very much incorrect (Rule 45, Sec. 3).
19. Ball is in play. Pitcher can make an assist (Rule 47, Sec. 7).
20. Shortstop has a much better chance of catching the ball.
21. Umpire cannot give a decision on this play until his attention has been called to the error of judgment (Rule 50).
22. An awful dumb runner. Supposing the ball bounds away from the fielder?
23. Absolutely correct. The runner could not slide into him to knock him out of the play.
24. Very bad baseball.
25. Second baseman covers on this particular pitch out.
26. Most dangerous throw a catcher can make.
27. Ball is in play (Rule 47, Sec. 7).
28. Never has been changed.
29. Only the pitcher backs up third base. The catcher protects the plate while the first baseman stays at first for a possible run-up play.
30. Correct play would be: attempt a double play via second base.
31. Shortstop throws to the catcher and then continues on to the plate.
32. Correct.
33. Ball is thrown for accuracy; never should be bounded.
34. All balls are fielded in as near a throwing position as possible.
35. Batsman is out; bases cannot be run (Rule 43; Rule 44, Sec. 4; Rule 48, Sec. 2).
36. First throw is to second base.
37. Second baseman is the relay player. First baseman protects first base.
38. Correct. Player throwing the ball takes the position vacated by the player receiving it.

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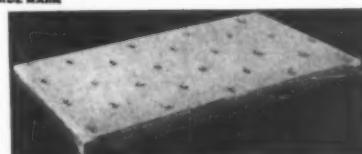
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39. The throw should go to third base, thus decreasing the chances of the runners on second and first advancing to positions where a hit, an error, wild pitch or a pass ball might score two runs.

40. Correct. An outfielder should never, however, challenge or dare a runner to advance a base.

41. Correct.

42. Pitcher hits the bag with his pivot foot and stops. He might have a throw to make.

43. He uses the counter-clockwise movement of his wrist.

44. Never allow the glove to obstruct the second baseman's view of the ball.

45. (a) Correct; (b) False; (c) Majority of cases; (d) False; (e) Always; (f) Never.

46. Slow hit balls in a great majority of cases do not give an opportunity to make force plays.

47. The ball is thrown to first base making the second out.

48. Batsman is out; not a force play; runner must be touched with the ball (Rule 44, Sec. 8; Rule 49, Sec. 9).

49. Umpire ruled correctly (Rule 47, Sec. 10).

50. (a) False; (b) False; (c) False; (d) True; (e) False; (f) False; (g) False; (h) True; (i) False; (j) False; (k) False; (l) False.

51. Players should bat in the following order: 6-3-5-2-7-9-8-4-1.

52. Touch or tag each base as it is passed. Never miss a bag.

53. Run as fast as possible and under full speed, make the turn at first.

54. First base is the objective. Never slacken speed but rather overrun the bag.

55. (a) Make every effort to reach third base with one out but do not make the same effort with none or two out.

(b) Two steps and a slide is the proper lead.

(c) Batsman is out unless two are already out.

(d) Runner must avoid collision with the fielder (Rule 49, Sec. 7).

(e) Runner must not interfere with the fielder (Rule 49, Sec. 8). Do not allow the fielder to make a put-out unless he throws the ball. Stop running and make him throw to some baseman.

(f) Batter is not out on the infield fly rule (Rule 49, Sec. 11). The batter should run the ball out.

(g) Remaining on the bag pre-

sents an opportunity to advance a base after catch.

(h) Play a safe distance from the bag, halfway between the bases; advance if the ball is not caught and return safely if the ball is caught.

(i) Be careful and not pass the runner.

(j) Runner must tag the bag at second base on his return to first base.

56. (a) Runner on third should make an attempt to score perhaps stopping a double play via second to first. If the ball reaches the catcher before he reaches the plate, he should stop and force a run-up play, so that the runner who was on first can get to third and the player hitting the ball can get to second.

(b) Infield fly rule does not apply in this situation (Rule 44, Sec. 8).

(c) Both runners remain on their respective bases until the ball is caught and then go forward after the catch. Runner on first must be careful not to be thrown out at second before the runner on third has crossed the plate (Rule 52).

(d) Good hitter at bat, do not attempt to steal second base. Weak hitter at bat, make the attempt in hope of drawing a wild throw.

57. (a) Runner on third makes the attempt to score. If the ball has him beaten he gets into a run-up play until the runners have advanced as far as possible.

(b) Be careful. The runner on second base must not take any chances to reach third base with two out.

(c) Runner is out, bases cannot be run (Rule 49, Sec. 12).

(d) Infield fly rule does not apply in this situation. Runners can advance at their own risk.

(e) Runner who was originally on the bag is entitled to it (Rule 45, Sec. 3).

(f) Take a lead off third base on foul territory. Avoid being hit by fairly hit ball. The runner on second takes his lead according to the movements of the pitcher, watching out for a quick throw from the catcher.

(g) Runner on third should make an attempt to score.

Quarter-Mile Training Routine

By Ted Swenson

Ted Swenson, assistant track coach and freshman football coach at the University of Iowa, maps out a quartermiler training regimen for the three to five week period preceding the first meet.

HERE are two generally accepted methods of training or conditioning quarter-milers: (1) Running more than the distance at under speed, or (2) running less than the distance at top speed.

About ten years ago most track coaches favored the first method. In recent years, however, there has been a swing towards the second theory. Assuming that a high school quarter-miler has a best mark of 52 seconds, and that the coach's target is 51, the athlete's early season routine may be arranged as follows:

Early season routine

On Monday he may run a fast 330 yards in about 37 seconds, rest 20 minutes and repeat, running the second 330 in about 37.5 seconds. The repeat performance has a definite value. By taking another whirl at the distance before resting too much, the athlete builds up the speed, cadence and "bottom" (endurance) essential in successful quartermiling.

On Tuesday the boy may be given a series of eight or ten starts of 30 to 40 yards each, with particular stress on stride work and block spacing. The workout may be finished with a fast 220 yards in about 24 seconds.

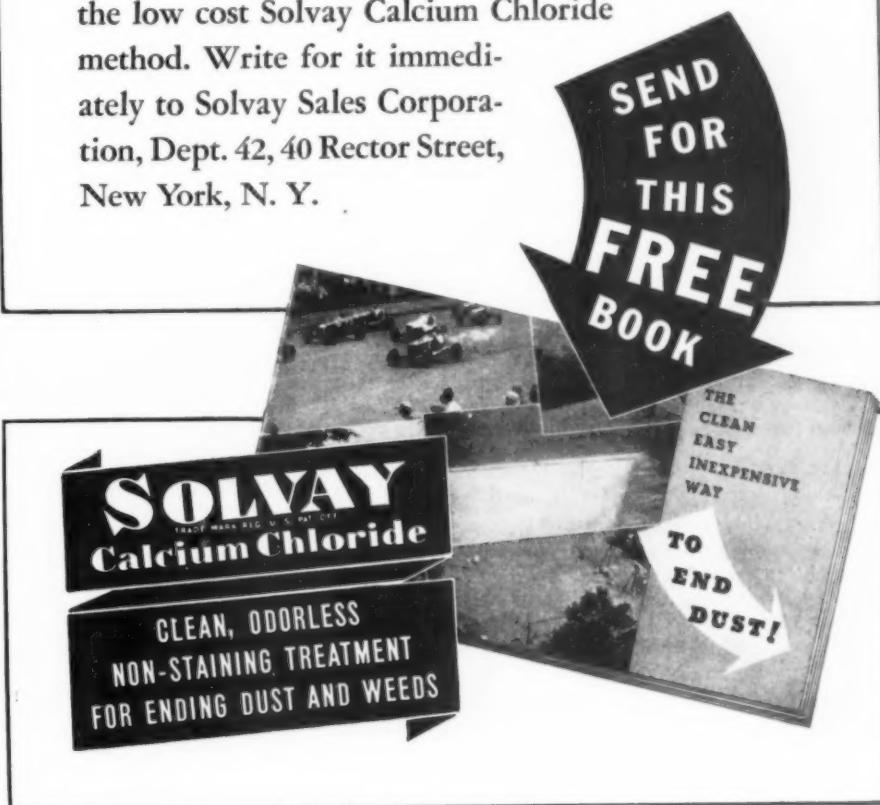
On Wednesday pace judgment may be stressed. The boy should stride through two quarters with a rest of 20 to 30 minutes between. The first quarter may be run in 57 seconds, the second in 58. To see how well he can judge pace, have him call out his time at the 220-yard mark. At this time of the year, he should be able to come within one second of the correct time. The first half of the quartermile should usually be run about one to one and a half seconds faster than the second half.

On Thursday it is advisable to devote part of the workout to practice on starting. The athlete may take about eight to ten starts of 30 to 40 yards, and finish with a half mile of jogging.

On Friday give the boy a time (Concluded on page 41)

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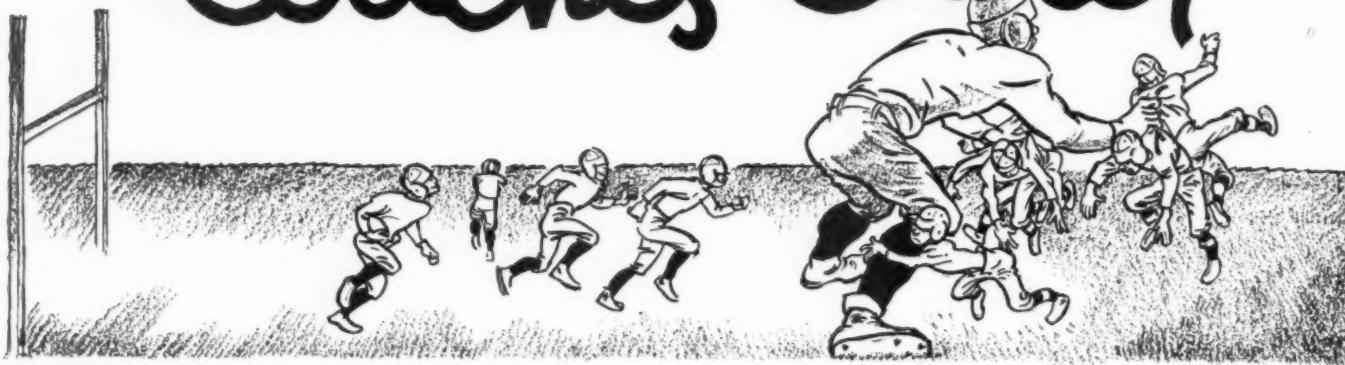


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Coaches' Corner



If you have something for this column send it to Bill Wood, Evanston Township High School, Evanston, Illinois.

Our weight contest continues to attract attention. Every section of the country has its champion. From Stadium High School, Tacoma, Wash., Football Coach Johnny Heinrick presents George Victor.

"We have in our great Northwest a football player whom we think is the high school giant of the year. He is George Victor, a 290-pound boy of Greek extraction who intends to make some money as a professional wrestler in the next few months."

Coach Howard W. Mason takes the stump for a South Haven, Kan., boy. "When you started this campaign to locate the largest boy in high school football, a couple of times I considered reporting a lad I was using in the right tackle position, but thought there were plenty of *really* big boys playing high school football. But after reading the reports of the little fellows from here and yonder, I decided it was time to put a damper on the situation until someone tells about a 300-pounder.

"When I reported to the gridiron last September, I looked the material over and was immediately sure of only one man. He was standing to one side alone—there wasn't room for anyone else very close—dressed in denim overalls and a white shirt. The rest of the boys were in football uniforms, so I asked the fellow why he wasn't in a suit. 'Gosh,' he said, 'have you got a suit big enough for me?'

"Hastening to reassure him that we would get one, I took his measurements: chest, 46 inches; waist, 42 inches; and shoes, size 12. In a few days the manufacturer sent back the order asking if there hadn't been a mistake. The gigantic uniform finally came, and I put my prodigy through his paces. He was very cautious at first. As he expressed it, 'I'd sure hate to hurt one of these little fellows.'

"When I put him on the scales that first week, the needle stopped at 315 pounds, but that weight didn't last long. Before the season was over, I

had him trimmed down to a mere shadow of his former self—296 pounds. Since the season closed, he has gained some of it back. His name in case you're interested is Warren Hallman. He is eighteen, a senior, and an unusually fine student."

Coach Lynn Marsh of Antlers, Okla., has a 312-pounder in Erby Webb, who played tackle on the football team last fall and is keeping in shape during the basketball season as a guard on the B-squad.

Wait a minute! This must be what we have been looking for! From Coach W. W. Combs, Jamestown, Tenn., comes word of one Gene Cravens, a 330-pound tackle for the York Agricultural Institute. Fletcher Sweet of the Knoxville *Journal* nominated young Cravens as the entire line on his East Tennessee All-Star team. "To put anybody else up there with him would just make our backs run farther on end plays," asserted Sweet.

By way of contrast, here is Loren Shackleford of Lathrop, Mo., 87 pounds of brawn that towers 5 ft. 1 in. in the air. Writes Coach A. M. Robertson:

"Shack played eighteen quarters this past season. He was one of fifteen lettermen. During the last two seasons he has played without the slightest injury. He is an excellent boxer and a good basketball guard."

Coach W. M. Wilbur, Spaulding High School, Barre, Vt., tells of Walter Lanfranconi, a young pitcher who went from Spaulding into organized baseball as a member of the Toronto club in the International League. When Tony Lazzeri took over the Toronto outfit last summer he found a team of "hitless wonders" that had just managed to put together a string of thirty odd scoreless innings. Lazzeri, the philosopher, took the situation calmly.

One day Lanfranconi pitched a fine game—only four hits and no walks or hit batsmen. He lost the game 2-0. In the locker room Manager Tony sought

him out, patted his shoulder and said:

"Never mind, kid. The next time out maybe you'll pitch a shutout. And with our slugging that will give us a tie."

According to Ted Swenson, assistant track coach at the University of Iowa, an official can't always be sure just what it is that is making the coach jump around on the bench during a game. Joy Kistler, well-known member of the Iowa coaching staff, was working a basketball game at Toledo, Iowa, and apparently doing his usual fine job. The visiting coach, however, kept getting more and more excited as the game wore on. Gesticulating wildly, he kept pointing to one of the Toledo players and yelling, "Watch Number 7!" When the whistle blew for the intermission, he dashed across the floor to the official:

"Kistler, you've got to watch that Number 7 on the other team! All during the first half you have let him get away with it! He's been spitting on the floor!"

Lester G. Bursey of Cooperstown, N. Y., would like someone from Ripley, Ohio, to explain just how that Ghost Basketball stunt is performed. What kind of paint is used?

"We have about five old men who have been playing the championship team of our intramural league each year and have been packing the gym. Usually we rent special outfits, consisting of old style bathing suits, etc. What with all this talk about black-outs and the fact that we are slowing up just a little bit, we thought we might look and play better in the dark."

We had heard of "hoss" races being lost by a nose but never a track meet until Coach H. H. Lemoin of Otsego, Mich., reported the following:

"Otsego was leading the field of Class C teams in the state track and field meet at Lansing in 1930. As the meet neared the end, the lead was still good with Otsego four points ahead of any other school."

"W. Hoke of Otsego was one of two left in the pole vault. He had one

trial left; his opponent had just missed his last one. It was a dramatic moment. If his vault were successful, Otsego would win the meet and permanent possession of the big trophy offered to the team winning the championship the greatest number of times over a five-year period. Otsego already had one leg on the trophy. Hoke took his run and went up on what appeared to be the best vault of the day. He cleared the bar with something to spare. Then it happened. Clinging to the pole a fraction of a second too long, he was unable to get the necessary clearance. In coming down his nose brushed the bar. After a few half-hearted jiggles the bar fell. Otsego trailed 15-14."

Remarkable is hardly the word for the string of 95 consecutive victories that Flat Gap High School of Virginia has put together over the past five years. Even more amazing is the fact that there are only 50 students in the school and that the streak has been compiled at the expense of some of the best teams in Virginia, Kentucky and Tennessee. We are indebted to Billy Carico for this item.

Coach Marlowe Slater, Blackburn Junior College, Carlinville, Ill., believes his intramural program reaches a larger percentage of the student body than do similar programs in other junior colleges in the United States. Blackburn has no required physical education course, but approximately 83 per cent of the 150 boys enrolled in the school participate in the well-organized intramural sports program.

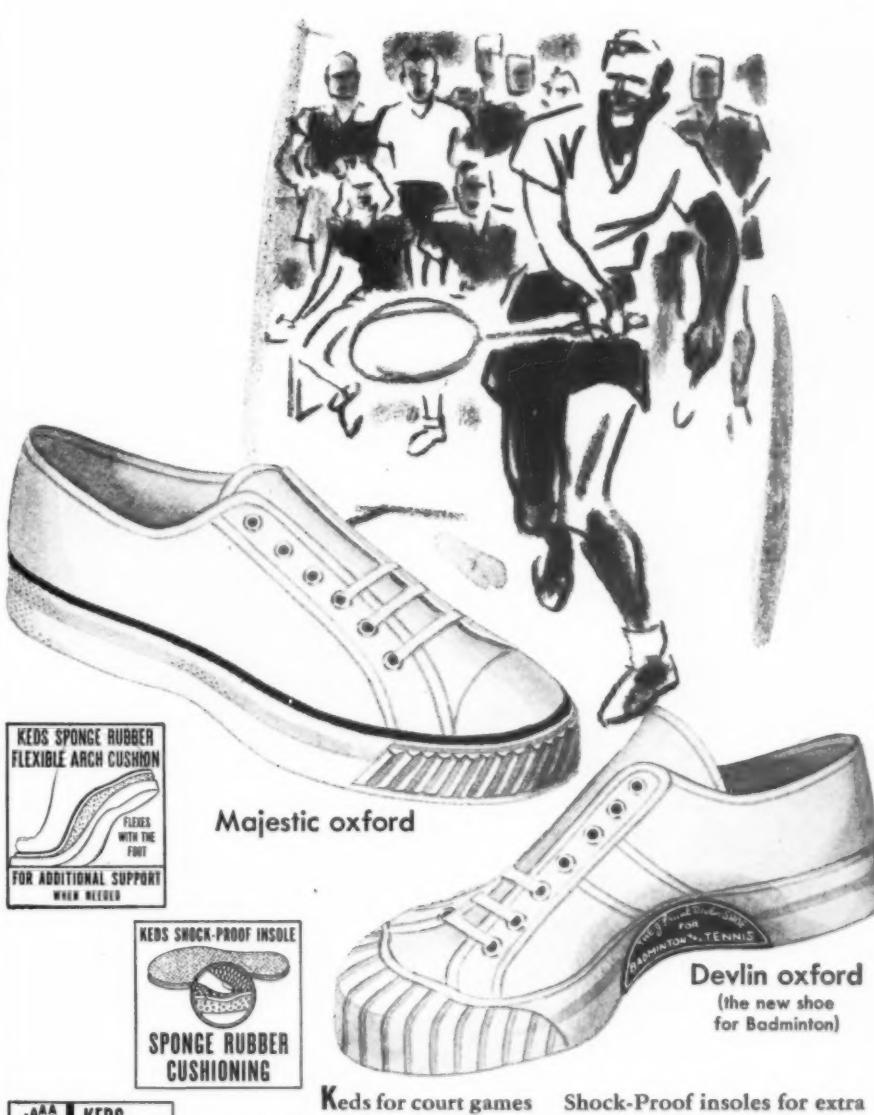
Down in Russellville, Ark., everyone is mighty proud of the impressive seventeen-year record of Coach Wallace Bailey, an alumnus of West Point. His football, track, basketball and golf teams have been successful in more than eighty per cent of their contests.

In an attempt to increase interest in studies among their athletes at Newland, N. C., Coach Fletcher Ferguson and his assistant, Harl Biggs, have put up a trophy to be awarded to the letterman making the best scholastic improvement during the year.

When he called the football roll last fall, Coach Ferguson must certainly have been familiar with some of the names. One of the linemen was a Ferguson. In the backfield was a Fletcher and a Franklin. A twin brother of the coach, Franklin Ferguson, is traveling secretary for the S.A.E. fraternity, Evanston, Ill.

Have you received your copy of this year's All-Sports Calendar that is put out by the Denver Chemical Company, makers of Antiphlogistine? Better than ever! There are still a few on hand, we understand. The line forms on the right.

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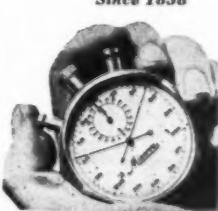
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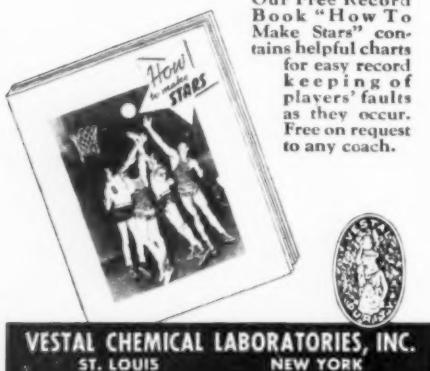
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New Books on the Sportshelf

GROOVE YOUR GOLF. By Ralph Guldahl. Pp. 220. Illustrated. Indianapolis: International Sports, Inc. \$2.

RALPH GULDAHL'S book is the latest and most elaborate of the Cine-Sports series of six- by four-inch flip books. Like its predecessors, *Groove Your Golf* is organized in such a way that by flipping the pages from cover to cover, you get a moving picture sequence of Guldahl demonstrating all the basic shots.

The author is one of the truly great players of the game. His two successive wins of the United States Open alone assure him of a niche in the golfing hall of fame, without considering his three successive Western Open championships and his magnificent victory in the Augusta Masters.

In his book he presents the fundamentals of good form along with proof of the principles. In simple, very readable fashion he covers every club and every basic shot. The exposition is authoritative, graphic and detailed enough for the most exacting reader.

The text runs along the inside half of every page. The outside consists of action picture panels of the author. Most of these panels are divided into five sections, small panels for details on grip and address and larger strips for the actual swing. Every basic shot is covered in this fashion. The arrangement provides both the opportunity to study successive positions in the swing and through the illusion of motion to gain an impression of the full swing. From a teaching standpoint, this novel arrangement is almost perfect.

THE ANGSTADT OFFICIAL TENNIS SCORE BOOK. Elizabeth (Pa.): A. Warren Angstadt. 50c.

HERE have been score cards and score sheets for tennis, but up until the lambent flame of genius touched Warren Angstadt there were no score books. Now, at last, at least one of every team's army of assistant managers will be expected to work for his numerals.

In organization and appearance, Angstadt's book resembles the average basketball scorekeeping device. It consists of twenty 10 by 5 1/4 inch score sheets bound with a soft cover. Each sheet has room for nine singles and six doubles matches. Following blank spaces for names and teams, there are squares for three sets and a margin for the name of the final winner.

The book is a handy device with which to keep a match-by-match record of the team; and, as such, it serves as a permanent record book for the season. It may also be used for table tennis.

SPORTS, PHYSICAL TRAINING AND WOMANHOOD. By Stephan K. Westmann, M.D. Pp. 220. Illustrated. Baltimore: Williams and Wilkins Co. \$4.

THE purpose of this book is to "supply information which will assist those intrusted with the training and teaching of girls and women in their sporting and physical activities." Although the author evidently has had intimate contact with physical education, being an obstetrician he colors his book with the idea of motherhood rather than womanhood.

He believes the main function of physical education for women is to develop perfect mothers for the future and therefore he strongly opposes competitive sports among women because "it is harmful in relation to the primary task of woman's life, maternity." He also says: "Every woman should remember that exaggerated sports involve her in the danger of becoming masculine."

Dr. Westmann gives convincing suggestions regarding the choice of physical activities for expectant mothers; on the other hand one cannot avoid the impression that the dangers of sports for women in general are exaggerated. Dr. Westmann says that sports develop masculinity in women, but isn't it just as true that masculine women choose the strenuous sports?

His statement that a permanent injury to the heart may result from exercise needs clarification. So far there has not been any convincing evidence that a sound heart can be so injured.

Illustrations of a more conventional type would perhaps facilitate the use of the book in schools. On the whole the text contains a great deal of valuable material and is written in a challenging manner.

PETER V. KARPOVICH

THE NEGRO IN SPORTS. By Edwin Bancroft Henderson. Pp. 371. Illustrated. Washington (D. C.): The Associated Publishers, Inc. \$2.15.

THE American Negro has written one of the most stirring chapters in the history of sport. To appreciate his achievements on the athletic field, you have to know something of the tremendous barriers he has had to surmount. For it is only within the past two or three decades that he received his emancipation in sports.

Today, in most of our schools, the Negro's eligibility to play is determined by his ability as a student, a sportsman and an athlete—and not by his color. As sportsmen we know that all bars of race, religion or creed are contrary to the "rules of the game."

In *The Negro in Sport* the author,

who is head of the department of health and physical education in the Negro public schools of the District of Columbia, pays tribute to the members of his race who distinguished themselves in all lines of athletic endeavor. He seeks not only to perpetuate the memory of their feats but to show the social significance of their contribution.

The pathway of the Negro athlete in recent years has been easy to follow. The whole world knows of America's famous "black auxiliary," who deported themselves so admirably at the last Olympic Games, and the long line of Negro pugilistic champions.

The author covers them all. He goes far back into the archives of sport and proceeds up to the present. He chronicles the Negro heroes' personal history, deeds and records. All the sports are covered: track and field, football, basketball, golf, tennis, and baseball.

•

Training Routine

(Continued from page 37)

trial, setting a definite goal and emphasizing pace over the first 220 yards. It is a good plan to have quartemilers and half milers finish each workout with a few "bursts" of 50 to 60 yards to speed up their cadence.

The float or coast plays an important role in a winning effort, and the runner should know exactly what it is and when to go into it. It is that stage of the race in which the runner gains rest through further muscular relaxation. With practice, the athlete is able to run in a more relaxed manner for a few strides without appreciably decreasing his speed or breaking form.

In learning the float, the beginner usually experiences a loss of speed. But constant practice in going from the dig to the float and back again will give the boy the idea. When it is done right, you can actually see the runner cease driving and settle into a glide-like stride.

The length of the float depends upon the condition of the runner and the nature of the particular race. For boys capable of turning in 51 or 52 second quartemiles, the coast should not be for more than 10 to 15 yards and should be applied ordinarily at about the 250 yard mark.

It must be recognized that maneuvering for position and meeting challenges may make it necessary to shift the float. The runner must coast at some point in the race, and he must learn by experience how to adjust himself.



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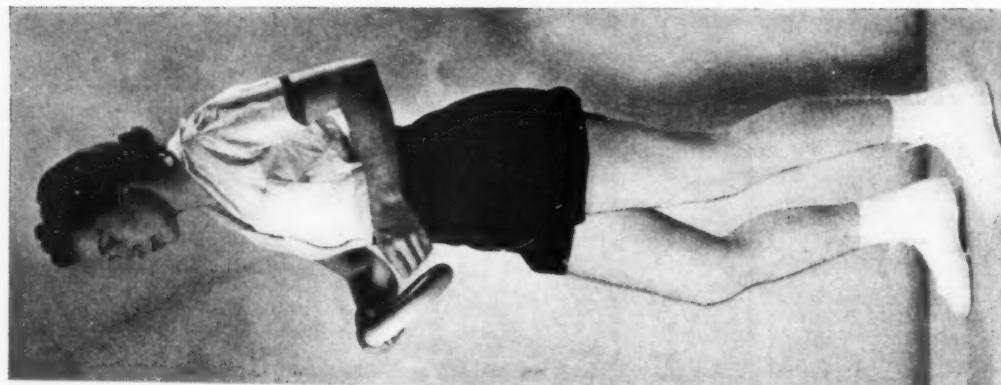
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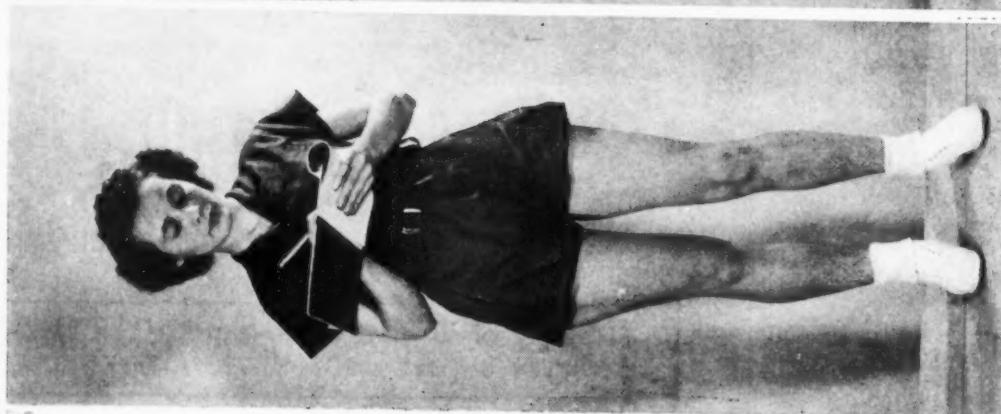
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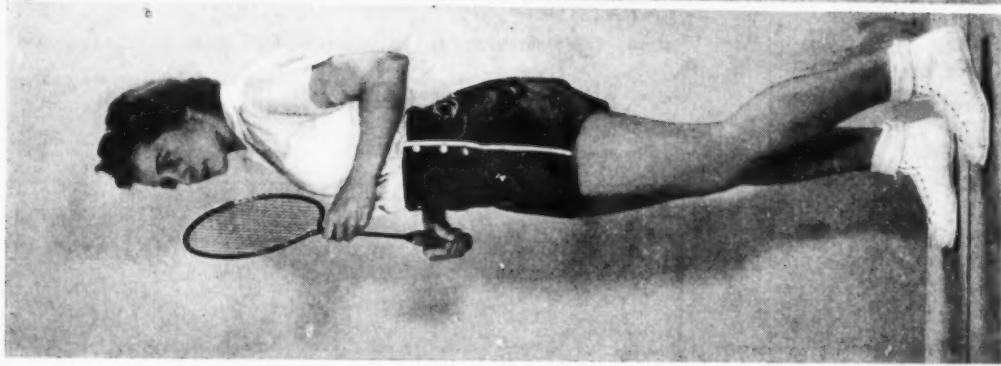
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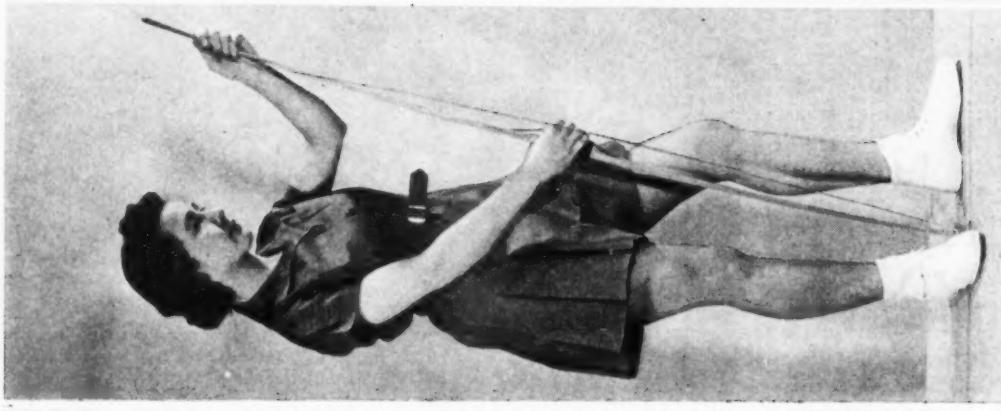
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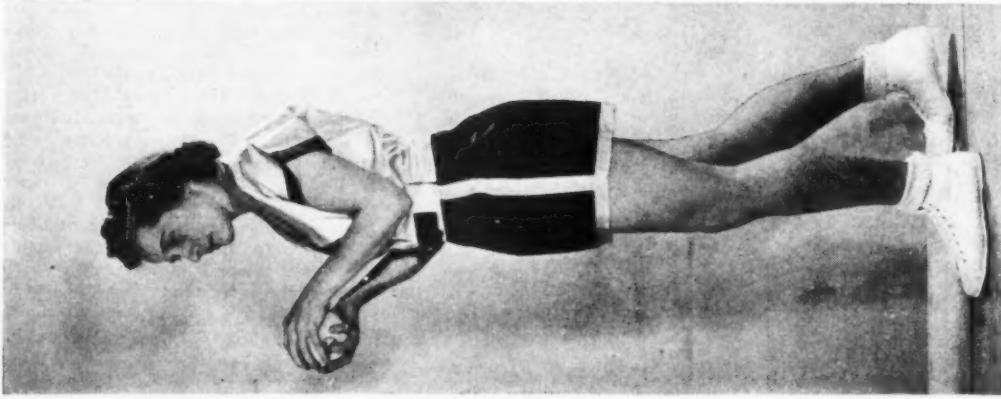
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One-piece play suit of copen blue linen cloth with pleats in front and back. Action back, yoke shoulder. Continuous crotch closing. About \$2. Without zipper, \$1.30.

Team Suit, ideal for basketball or softball. Royal blue, gold-trimmed athletic satin shorts. Shirt opens down front. Perspiration proof. Durable. Washable. About \$6.

Accessories by Alex Taylor; athletic socks knitted with Durene mercerized yarn.

Running Analysis

(Continued from page 15)

stride are there any contacts with the track which are in front of the center of weight. Therefore, full speed striding is a pushing action, and in no sense is it ever a pulling action.

Although the arms have no primary function to perform in the forward propulsion of the body, they serve several purposes which are indispensable in executing and maintaining the stride.

1. They support the body in the "set" position.

2. They initiate the reflex running pattern (see Fig. 1). When the gun is fired, if a sprinter is thoroughly trained in starting, the events which follow are purely involuntary. A definite movement pattern is executed, the details of which depend on which foot is back at the start. If the right foot is back, the left arm initiates the movement pattern. If the left foot is back, the right arm starts the mechanism in motion.

3. The arms compensate for body disalignment in striding due to body rotation. When the right leg is thrust backward, and the left leg driven forward, there is a tendency to rotate the trunk to the right. This body disalignment is compensated for by swinging the left arm backward and the right arm forward, thus keeping the trunk aligned in the direction of the run. Obviously, when the leg action is reversed, the arm action is also changed.

4. Since the arms serve as compensatory members in trunk alignment during striding action, the arm action force is important. Due to the fact that the arms constitute a part of the reflex movement pattern involved in running, the force of the arms must be commensurate with the force of the leg drive. Feeble arm action associated with forceful leg drive would result not only in poor trunk alignment but also in a lack of smooth striding.

Summary

When a runner starts a race, his body is started forward by propelling forces from behind his center of weight. The force is applied first by the back foot, then by both feet simultaneously, and finally by the front foot alone. After the body has been set in motion, its speed is increased and maintained by force applied by the driving leg which is always behind the center of weight. In running, the body is never pulled forward by either the arms or the legs.



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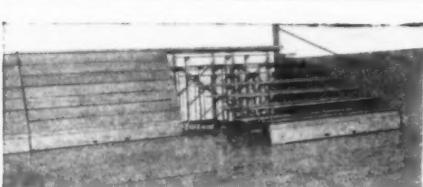


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National Federation Meeting

St. Louis, February 26 and 27

HIGHWATER mark of the National Federation of State High School Athletic Associations' annual meeting in St. Louis on February 26 and 27 was the establishment of an independent national office with headquarters in Chicago, and the appointment of H. V. Porter as full-time executive-secretary for a period of three years beginning September 1.

The move was made of necessity. The work of the organization has grown to such magnitude that it can no longer be adequately handled in the office of the Illinois High School Athletic Association, where the Federation's activities have been administered to date.

Mr. Porter has been connected with the National Federation in an executive capacity since its very inception. He has had experience as a coach, as a high school principal, as a city superintendent of schools, as a college instructor, and for the past several years has been assistant manager of the Illinois High School Athletic Association, managing editor of the state bulletin, secretary of both the National Basketball Committee and the National Interscholastic Football Committee, and author of several books on athletics.

The following men were appointed to represent the high schools on the various rules committees: basketball, H. V. Porter, Floyd A. Rowe of Cleveland, F. P. Maguire of Harrisburg, Pa., and G. Warren Phillips of Hebron, Ind.; track, E. A. Thomas of Topeka; swimming, C. E. Forsythe of Lansing, Mich.; wrestling, J. Griffith of Tulsa.

On Sunday afternoon, the Equipment Committee met with representatives of the sporting goods manufacturers to discuss problems of mutual concern. This committee was organized in 1929 to investigate the possibilities of providing member schools with satisfactory equipment at prices suited to their budgets.

The committee has worked out a co-operative arrangement between the schools and the manufacturers so that the National Federation approved stamp is placed on certain equipment which the tests of the Equipment Committee have proven to be satisfactory. In the case of basketballs, the various state associations have confined their use of tournament balls al-

most exclusively to those which have been approved by the National Federation and which bear the approval stamp. The National Federation sanction has also been granted for a type of outdoor playground basketball, which has the same reaction as the official leather basketball and which, therefore, is conducive to the development of good habits on the part of young players.

The executive officers of 20 state high school athletic associations convened in the evening with Carl Burris of Missouri presiding and E. A. Thomas as secretary. F. R. Wegner of New York discussed the problems connected with the standardizing of forms for the collection of statistics on athletic injuries. A committee made up of Wegner, P. F. Neverman of Wisconsin and O. L. Webb of Nebraska

have prepared such forms on which the various insurance reports can be made so that accurate and detailed information will be available for comparative purposes.

A. L. Trester outlined the policy of Indiana relative to the prohibition of coach activity in organizing sectional games during the summer for commercial reasons.

Among the topics which received considerable attention were:

1. The trend relative to the inclusion of music and literary activities in the work of the athletic association.

2. Problems connected with the broadcasting of state-sponsored meets and tournaments.

3. The effect of recent rulings relative to social security and income tax on state high school associations.

Because of the stress placed on the athletic phase of the inter-school program, there has been a tendency in the past to neglect many of the other departments of the program. In the literary and music field, for example, various state-wide and even nation-wide groups have developed without the sanction of school executives. As a result, commercial interests have come into the field and the activities have been planned with little consideration to the general welfare of the rest of the school program.

The resulting problems have encouraged several states to undertake the supervision of most of the inter-school contests involving these activities. Regulations somewhat similar to those



H. V. Porter

Full-Time Executive Secretary

which govern athletics have been drawn up and are being administered by the same controlling agencies.

Illinois is the latest state to invest such powers in its state-wide organization. There is also agitation along this line in Indiana, Ohio and Michigan. In most cases the impetus has come from the members of the high school principals' association.

At the general meeting the next day, representatives from 30 states participated in an informal discussion on topics of mutual interest. P. F. Neverman gave a review of athletic injury activities throughout the nation. He stated that there are now 23 states that cover their athletes.

One of the values of this type of work has been the collection of accurate statistics which have enabled the various interscholastic rules committees and administrative bodies to modify the athletic contests in such a way as to reduce the danger to the health of athletes. These statistics have been used by the Inter-scholastic Football Committee and by the National Federation Equipment Committee in their deliberations with the athletic goods manufacturers.

C. W. Whitten of Illinois, retiring secretary, spoke on the history of the National Federation. He outlined the origin of the organization, steps in its growth, aims and policies, and the methods it employs to promote its objectives.

During the course of the business meeting in the afternoon, R. E. Rawlins of Pierre, S. D., and P. A. Jones of Sharon, Pa., were re-elected to the Executive Committee for a term of three years. L. L. Forsythe of Michigan, the third member of the Committee whose term had expired, was replaced by J. E. Rohr of Nekoosa, Wis.

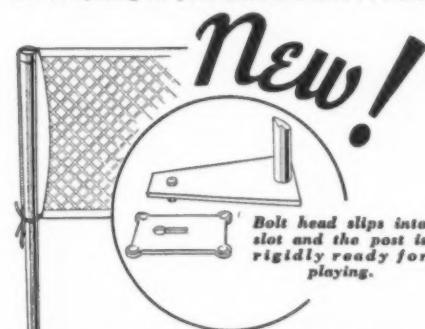
At this session the council unanimously adopted a resolution commanding the Executive Committee on its action in establishing an independent national office with a full-time executive secretary, their choice of officer and expressing appreciation for the great service and fine leadership of C. W. Whitten, retiring secretary.

The California Interscholastic Federation applied for membership in the National Federation. This application was accepted by unanimous vote and California is now a full-fledged member. This makes the membership of the Federation 36 states. With the exception of a few of the Atlantic states, all states are members with the exception of Texas and Kentucky. At the last meeting of the Kentucky Coaches' Association a recommendation was made to the state board of control to apply for membership.

As far as Texas is concerned, the organization embraces all the schools of the state, including grade schools and private schools. The state association work is administered through the state university rather than directly by the high school principals. These factors in state organization have created some problems which have made Texas slow in joining the other states in national activities.

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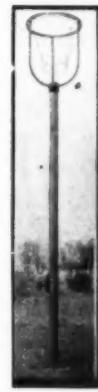
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West Virginia

Broaden officiating setup

OUR officials will be used in the state basketball tournament this year instead of the customary two. In previous years, only West Virginia men were employed for officiating purposes, which gave rise to mutterings of "sectionalism." While this criticism had no reasonable basis, the state board of appeals decided to hire two additional men and rotate their assignments. The "Last-Bilt" type of basketball was approved for all tournaments in the state championship series.

As a result of the increased demand for National Federation football rules, the state board is sending questionnaires to all high schools to determine the sentiment in regard to this code. The results will be announced at the annual spring meeting of the board of control.

A report comes from Charleston that the annual all-star football game will be played in 1940 as a pre-season game. The state association refused to sanction this game, which had been a post-season attraction up to this year. Only seniors are eligible for this game, and to avoid their loss of eligibility for winter sports it was decided to stage this game during the late summer.

MAURICE J. LANDERS,
Washington, D. C.

Vermont

Bone of contention

THE Coaches Association is taking inventory again, this time at the request of the headmasters' club on the matter of football rules. Secondary schools in the state have always adhered to the collegiate (N.C.A.A.) code. Now, however, there is increasing agitation for the adoption of the National Federation rules. The football coaches have been asked in a circular letter to express their preference. The complete results will be ready for release in the near future.

Gordon Connor, president of the Coaches Association, and mentor at Bellows Free Academy in St. Albans, is working on plans for an annual coaches' banquet.

ORSON W. "ORRIE" JAY,
Vermont H. S. Coaches Assn.,
Burlington, Vt.

Wisconsin

Reciprocity agreements

OFFICIALS' reciprocity agreements have been negotiated with Illinois and Michigan. The agreement is given in full:

1. To be eligible to officiate in an athletic contest between high schools in either state, an official must be registered with the athletic association of the state in which he resides.

2. Registration in his own state will entitle an official to the privilege of reciprocity registration with the other state.

3. An official who desires reciprocity registration may secure it by making application to his home state. There is a reciprocity fee of fifty cents in Illinois while Michigan gives the sanction without charge. Upon proper notification, the neighboring state will issue a reciprocity membership card direct to the official and will include his name on the various published lists. Copies of these lists and proper contract forms will be furnished the official.

4. All fees for affiliate membership collected by the home state will be forwarded to the neighboring state at the end of the season.

Kentucky

Flat rate guarantees

WHEN the Coaches Association goes into its huddle at Lexington this month, the members will be polled on a number of interesting proposals. For one thing, they will be asked to express their opinion on a recommendation to pay each basketball team in the state tournament a flat sum of \$175 upon arrival in Lexington, instead of furnishing room and board as in the past. After being eliminated, should the team wish to break camp and go home in order to save some of the guarantee, it will be its privilege to do so.

The coaches will also vote on the following suggestions, which if favored by the majority, will be passed along to the Athletic Association: (1) state membership in the National Federation; (2) to change the eligibility rules so that a boy will become ineligible on his 19th birthday, and to strike out of the rules the clause: No student who has been enrolled in the high school eight semesters shall thereafter be eligible; and (3) to require all registered officials to wear an emblem of the state officials' association on their shirt or sweater.

The proposal pertaining to eligibility is sure to create much discussion throughout the state. It simply provides that all undergraduates who meet the scholastic requirements are eligible to participate as long as they are under 19 years of age.

Inez High School, located back in the mountains where there are no railroads, telephones or telegraph, has announced that their gym, which burned down early in January, will be replaced by another modern structure. The basketball team is now



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ON PAGE 48 OPPOSITE THIS PAGE ARE
OTHER LISTINGS AND FORM FOR SIGNATURE



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playing on the floor of another county high school and at this writing has won 29 consecutive games.

The Coaches Association, in conjunction with the Athletic Association, is making an earnest effort to revive interest in the all-American game of baseball during the coming season. Sectional and state play-offs for the titles have been promised by Ted Sanford, secretary of the Athletic Association, if enough interest is shown.

W. J. "BLUE" FOSTER,
Kentucky H. S. Coaches Assn.,
Newport, Ky.

Idaho

Track ballot

THE board of control is attempting to determine the sentiment of the member schools in regard to a proposal to eliminate some of the events on the present track schedule.

The events under fire are the javelin, the discus and the shot put, activities which other states have already lopped off their schedules. The coaches are being asked through a questionnaire in the state bulletin whether they favor the elimination of these

events and what events they would substitute for them should they be eliminated.

Whatever they decide, nothing will be done about it until the 1940-41 track season.

Nebraska

Qualifying meets

A SYSTEM of qualifying meets will be used to determine the eligible contestants for the state track and field meet at the University of Nebraska Memorial Stadium on May 10 and 11. The qualifying meets must be held between April 12 and May 4, inclusive, must have five or more participating teams and must be approved by the state office. A number of these meets have already been approved, and a complete list will appear in future issues of the state bulletin.

The board of control has requested that every effort be made to schedule these meets on dates other than April 19 and 20, the dates which have been set aside for the district music contests.

Illinois

Post-season games barred

THE rule prohibiting post-season games, which the state association adopted by an almost unanimous vote, is now in effect. As a result, no football game may be scheduled after the first Saturday in December and no basketball game after the first state tournament.

This rule prohibits the scheduling of practice games during the spring football training season. The scheduling of such games led to considerable agitation for the elimination of all spring football practice. With the prohibition of actual games, however, the disadvantage of spring practice will now be negligible.

A basketball of a natural tan color is prescribed for all tournament play. The balls will be one of the three National Federation approved types. Only balls of the molded construction will be used. The state finals will be played on a floor 84 feet from end line to end line with provisions for the four-foot area behind the baskets.

H. V. PORTER,
Illinois H. S. Athletic Assn.,
Chicago, Ill.

Texas

Study on 18-year age rule

THERE have been quite a few local and very limited studies made by earnest high school students showing that the newly adopted 18-year age eligibility rule (which goes into effect on September 1) will exclude a large number of worthy and bona fide students from participation in Interscholastic League contests.

In an attempt to get some definite and positive facts relating to the effect of the League's adoption of the lower age limit, and how it will affect each conference, the State Office assembled the following data from the 1939 football eligibility blanks. The study covers over 20,000 participants, and gives a complete picture of what will happen.

1. In abolishing the semester and participation rules and adopting the 18-year age rule, there is an actual gain in number of boys for all conferences 54.25 per cent over the number of boys eligible to return under present rules. There will be 1,622 more boys eligible under the new plan than under the present plan.

2. Exactly 27.15 per cent of the boys in all conferences under 19 and over 18 on September 1 will be ineligible under the present semester and participation rules. These boys are still eligible as far as the present 19-year age rule is concerned.

3. The new age rule will permit the return of 2,962 boys who are still eligible for state aid, as against 1,368 boys under 19 years but over 18 who are not eligible for state aid.

4. The present rules permit 6.74 per cent in all conferences to return; whereas, the new plan permits a return of 14.6 per cent boys.

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